

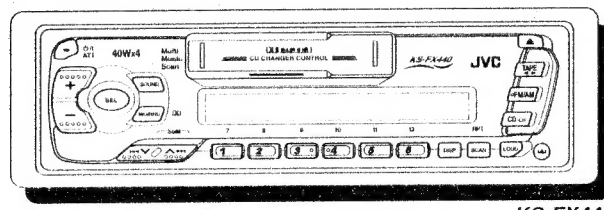
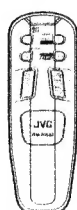
KS-FX440
KS-FX240

JVC

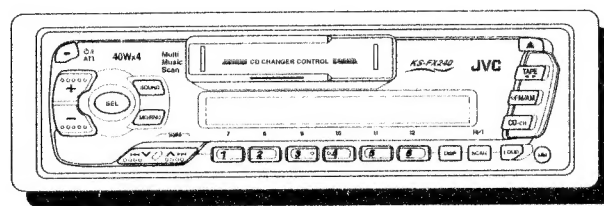
SERVICE MANUAL

CASSETTE CAR RECEIVER

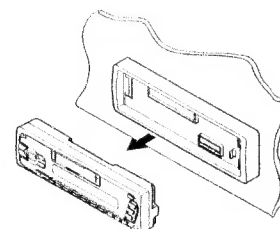
KS-FX440 KS-FX240



KS-FX440



KS-FX240



Area Suffix (KS-FX240)

J ----- Northern America
E ----- Continental Europe
U ----- Other Areas


Area Suffix (KS-FX440)

J ----- Northern America
U ----- Other Areas

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Safety Precaution

 **CAUTION** Burrs formed during molding may be left over on some parts of the chassis. Therefore, pay attention to such burrs in the case of performing repair of this system.

The following table lists the differing points between Models (KS-FX240 and KS-FX440) in this series.

	KS-FX240	KS-FX440
DOLBY B	—	○
REMOTE CONTROL	—	○

NOTE : — NOT USED ○ USED

JVC



CASSETTE RECEIVER

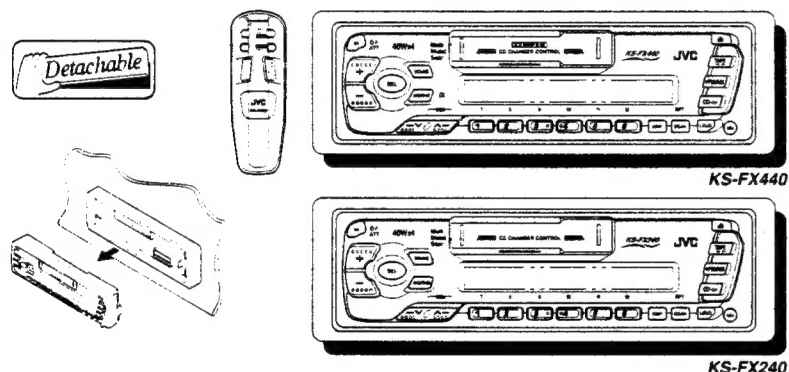
KS-FX440/FX240

RECEPTOR-REPRODUCTOR DE
CASSETTE

KS-FX440/FX240

RADIOCASSETTE

KS-FX440/FX240



For installation and connections, refer to the separate manual.
Para la instalación y las conexiones, refiérase al manual separado.
Pour l'installation et les raccordements, se référer au manuel séparé.

INSTRUCTIONS MANUAL DE INSTRUCCIONES MANUEL D'INSTRUCTIONS

For customer Use:
Enter below the Model No. and
Serial No. which are located on
the top or bottom of the cabinet.
Retain this information for future
reference.

Model No. _____

Serial No. _____

FSUN3058-631
[J]

ENGLISH

ESPAÑOL

FRANÇAIS

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Thank you for purchasing a JVC product. Please read all instructions carefully before operation, to ensure your complete understanding and to obtain the best possible performance from the unit.

Instructions

BEFORE USE

* For safety....

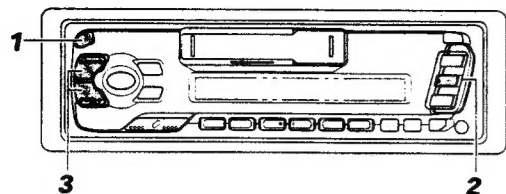
- Do not raise the volume level too much, as this will block outside sounds, making driving dangerous.
- Stop the car before performing any complicated operations.

* Temperature inside the car....

If you have parked the car for a long time in hot or cold weather, wait until the temperature in the car becomes normal before operating the unit.

KS-FX440
KS-FX240

BASIC OPERATIONS



Note:

When you use this unit for the first time, set the built-in clock correctly, see page 15.

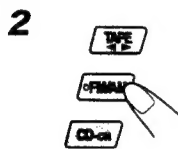
ENGLISH



Turn on the power.

Note on One-Touch Operation:

When you select a source in step 2 below, the power automatically comes on. You do not have to press this button to turn on the power.

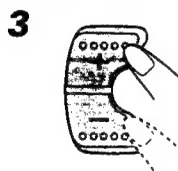


Select the source.

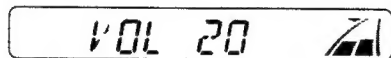
To operate the tuner, see pages 4 – 8.

To operate the tape deck, see pages 9 – 11.

To operate the CD changer, see pages 18 – 20.



Adjust the volume.



Volume level appears.

4 Adjust the sound as you want (see pages 12 – 14).

To drop the volume in a moment

Press \odot /ATT briefly while listening to any source. "ATT" starts flashing on the display, and the volume level will drop in a moment.

To resume the previous volume level, press the button briefly again.

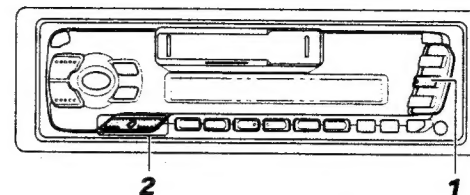
To turn off the power

Press \odot /ATT for more than 1 second.

3

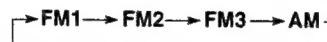
RADIO OPERATIONS

Listening to the radio

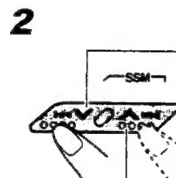
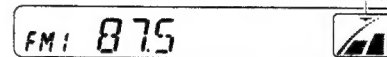


Select the band (FM1, FM2, FM3 or AM).

You can select any one of FM1, FM2, and FM3 to listen to an FM station.



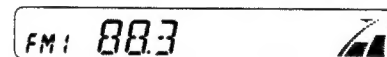
Audio level indicator



To search stations of lower frequencies.

Start searching a station.

When a station is received, searching stops.



To search stations of higher frequencies.

To stop searching before a station is received, press the same button you have pressed for searching.

To tune in a particular frequency manually:

1 Press FM/AM to select the band.

2 Press and hold \blacktriangleleft or \blacktriangleright until "M" starts flashing on the display.

Now you can manually change the frequency while "M" is flashing.

3 Press \blacktriangleleft or \blacktriangleright repeatedly until the frequency you want is reached.

• If you hold down the button, the frequency keeps changing until you release the button.

4

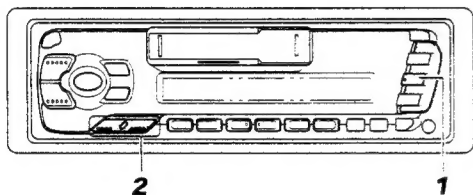
Storing stations in memory

You can use one of the following two methods to store broadcasting stations in memory.

- Automatic preset of FM stations: SSM (Strong-station Sequential Memory)
- Manual preset of both FM and AM stations

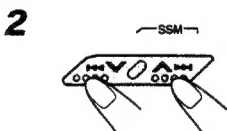
FM station automatic preset: SSM

You can preset 6 local FM stations in each FM band (FM1, FM2, and FM3).



→ FM1 → FM2 → FM3 →

Select the FM band number (FM1, FM2 or FM3) you want to store FM stations into.



Press and hold the both buttons for more than 2 seconds.

FM1 55M

"SSM" appears, then disappears when automatic preset is over.

Local FM stations with the strongest signals are searched and stored automatically in the band number you have selected (FM1, FM2 or FM3). These stations are preset in the number buttons — No. 1 (lowest frequency) to No. 6 (highest frequency).

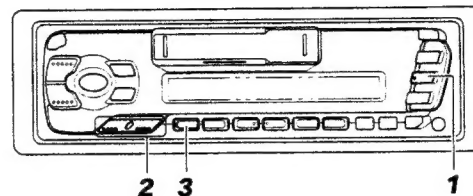
When automatic preset is over, the station stored in number button 1 will be automatically tuned in.

ENGLISH

Manual preset

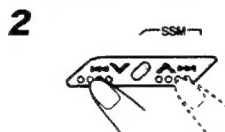
You can preset up to 6 stations in each band (FM1, FM2, FM3 and AM) manually.

EXAMPLE: Storing an FM station of 88.3 MHz into the preset number 1 of the FM1 band



Select the FM1 band.

FM1 87.5



Tune into a station of 88.3 MHz.

See page 4 to tune into a station.

FM1 88.3



Press and hold the button for more than 2 seconds.

FM1 88.3 P1

Preset number "P1" starts flashing for a while.

4

Repeat the above procedure to store other station into other preset numbers.

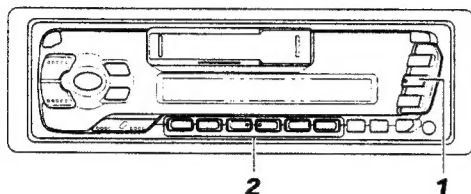
Notes:

- A previously preset station is erased when a new station is stored in the same preset number.
- Preset stations are erased when the power supply to the memory circuit is interrupted (for example, during battery replacement). If this occurs, preset the stations again.

KS-FX440
KS-FX240

Tuning into a preset station

You can easily tune into a preset station.
Remember that you must store stations first. If you have not stored them yet, see pages 5 and 6.



1



Select the band (FM1, FM2, FM3 or AM) you want.

→ FM1 → FM2 → FM3 → AM

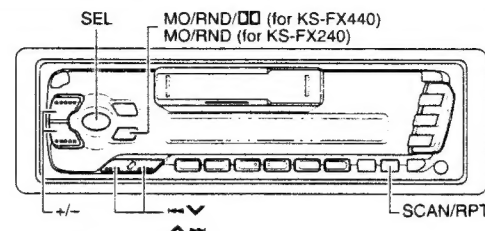
2



Select the number (1 – 6) for the preset station you want.

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Other convenient tuner functions



Scanning broadcast stations

When you press SCAN/RPT while listening to the radio, station scanning starts. Each time a broadcast is tuned in, scanning stops for about 5 seconds (tuned frequency number flashes on the display), and you can check what program is now being broadcast.

If you want to listen to that program, press the same button again to stop scanning.

Selecting FM reception sound

When an FM stereo broadcast is hard to receive:

Press MO/RND/□□ (mono/random/Dolby NR: for KS-FX440) or MO/RND (mono/random: for KS-FX240) while listening to an FM stereo broadcast. The sound you hear becomes monaural but reception will be improved.

Lights up when receiving an FM broadcast in stereo.



To restore the stereo effect, press the same button again.

Changing the AM/FM channel intervals

When using this unit in an area other than North or South America:

When this unit is shipped from the factory, the channel intervals are set to 10 kHz for AM and 200 kHz for FM. You can change the channel intervals by following the procedure below.

1 Press SEL (select) for more than 2 seconds.

"LEVEL", "CLOCK H", "CLOCK M" or "AREA" appears on the display.

2 If "AREA" does not appear, press ◀◀ or ▶▶ until it appears.

3 Press +.

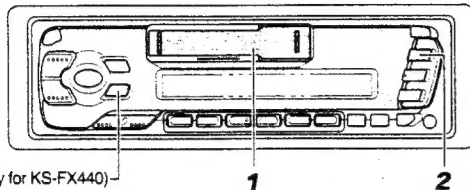
"AREA EU" appears and the channel intervals are set to 9 kHz for AM and 50 kHz (for manual tuning) / 100 kHz (for searching) for FM.

To reset to the factory setting, follow the above step 1 and 2, then press – in step 3 ("AREA US" appears on the display.)

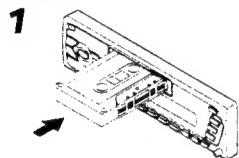
AREA EU: Select this when used in an area other than North and South America.
AREA US: Select this when used in North or South America.

TAPE OPERATIONS

Listening to a tape



3 (Only for KS-FX440)



1 Insert a cassette.

The unit turns on and tape play starts automatically. When one side of the tape reaches its end during play, the other side of the tape automatically starts playing. (Auto Reverse)

Note on One-Touch Operation:

When a cassette is already in the cassette compartment, pressing TAPE ◀▶ turns on the unit and starts tape play automatically.



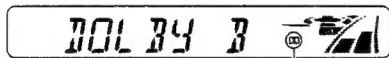
2 Select the tape direction.

Each time you press the button, the tape direction changes alternatively – forward (TAPE : : :) and reverse (TAPE : : :).



3 Turn on or off the Dolby B NR* as needed.

Each time you press the button, the Dolby B NR turns on and off. (Only for KS-FX440)




This indicator lights up when the Dolby B NR is turned on.

To stop play and eject the cassette

Press ▲.

Tape play stops and the cassette automatically ejects from the cassette compartment. If you change the source to AM/FM or CD changer, the tape play also stops (without ejecting the cassette this time).

• You can also eject the tape with the unit turned off.

* Dolby Noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

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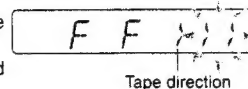
To fast-forward and rewind a tape

- Press ▲▶▶ for more than 1 second to fast-forward the tape.

When the tape reaches its end, the tape is reversed and playback starts from the beginning of the other side.

- Press ◀◀▼ for more than 1 second to rewind the tape.

When the tape reaches its end, playback of the same side starts.



Tape direction

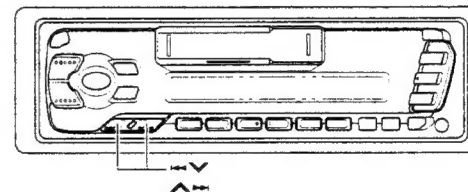


To stop fast-forward and rewind at any position on the tape, press TAPE ◀▶.

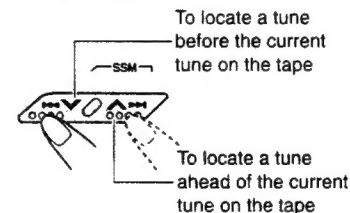
Tape play starts from that position on the tape.

Finding the beginning of a tune

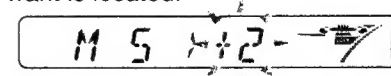
Multi Music Scan allows you to automatically start playback from the beginning of a specified tune. You can specify up to 9 tunes ahead or before the current tune.



During playback



Specify how many tunes ahead or before the current tune the tune you want is located.



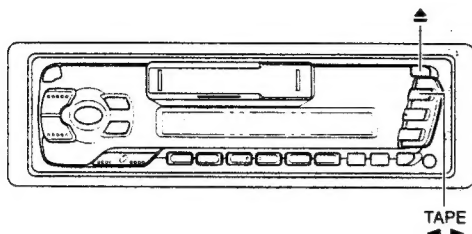
Each time you set the tune, the number changes up to ±9.

When the beginning of the specified tune is located, playback starts automatically.

Notes:

- While locating a specified tune:
 - If the tape is rewound to its beginning, playback starts from the beginning of that side.
 - If the tape is fast forwarded to the end, it is reversed and played from the beginning of the other side.
- In the following cases, the Multi Music Scan function may not operate correctly.
 - Tapes with tunes having long pianissimo passages (very quiet parts) or non-recorded portions during tunes.
 - Tapes with short non-recorded sections.
 - Tapes with high level noise or humming between tunes.

Other convenient tape functions



TAPE

Prohibiting tape ejection

You can prohibit the tape ejection and can "lock" a tape in the cassette compartment. Press and hold TAPE ◀▶ and ▲ for more than 2 seconds. "EJECT" flashes on the display for about 5 seconds, and the tape is "locked."

To cancel the prohibition and "unlock" the tape, press and hold TAPE ◀▶ and ▲ for more than 2 seconds again. "EJECT" flashes again for about 5 seconds, and this time the tape is "unlock."

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SOUND ADJUSTMENTS

Turning on/off the loudness function

The human ear is less sensitive to low and high frequencies at low volumes. The loudness function can boost these frequencies to produce a well-balanced sound at low volume level.

Each time you press LOUD, the loudness function turns on/off alternatively.



LOUD ON



LOUD OFF

Selecting preset sound modes

You can select a preset sound adjustment suitable to the music genre.

Each time you press SOUND, the sound mode changes as follows.



SCM OFF → BEAT → SOFT → POP

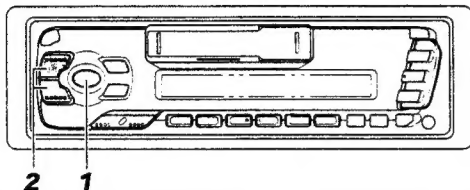
Indication	For:	Preset values		
		Bass	Treble	Loudness
SCM OFF	(Flat sound)	00	00	On
BEAT	Rock or disco music	+2	00	On
SOFT	Quiet background music	+1	-3	Off
POP	Light music	+4	+1	Off

Notes:

- You can adjust the preset sound mode as you like, and store in memory. If you want to adjust and store your original sound mode, see "Storing your own sound adjustments" on page 14.
- To adjust only the bass and treble reinforcement levels as you like, see "Adjusting the sound" on page 13.

Adjusting the sound

You can adjust the treble/bass sounds and the speaker balance.



1



Select the item you want to adjust.

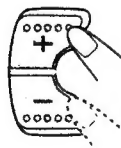
BAS → TRE → FAD → BAL → VOL

Indication	To do:	Range
BAS (bass)	Adjust the bass	-6 (min.) — +6 (max.)
TRE (treble)	Adjust the treble	-6 (min.) — +6 (max.)
FAD (Fader)*	Adjust the front and rear speaker balance	R6 (rear only) — F6 (front only)
BAL (Balance)	Adjust the left and right speaker balance	L6 (left only) — R6 (right only)
VOL (Volume)	Adjust the volume	00 (min.) — 50 (max.)

Note:

* If you are using a two-speaker system, set the fader level to "00" (center).

2



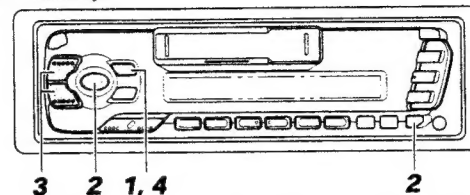
Adjust the level.

Note:

Normally the + and - buttons work as the volume control buttons. So you do not have to select "VOL" to adjust the volume level.

Storing your own sound adjustments

You can adjust the sound modes (BEAT, SOFT, POP: see page 12) as you like and store your own adjustments in memory.



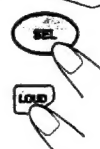
1



Call up the sound mode you want to adjust.
See page 12 for details.

Within
5 seconds

2



To adjust the bass or treble sound level
Select "BAS" or "TRE."

To turn on or off the loudness function
Each time you press LOUD, the loudness function turns on and off alternatively. (→ go to step 4)

Within
5 seconds

3



Adjust the bass or treble level.
See page 13 for details.

Within
5 seconds

4



Press and hold SOUND until the sound mode you have selected in step 1 flashes on the display.
Your setting is stored in memory.

5

Repeat the same procedure to store other settings.

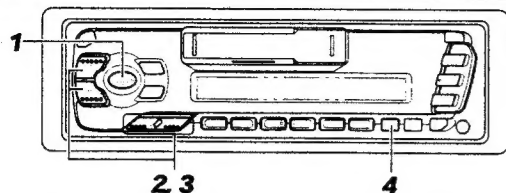
To reset to the factory settings

Repeat the same procedure and reassign the preset values listed in the table on page 12.

OTHER MAIN FUNCTIONS



Setting the clock



1 Press and hold the button for more than 2 seconds.
"CLOCK H," "CLOCK M," "LEVEL" or "AREA" appears on the display.

2 Set the hour.
1. Select "CLOCK H" if not shown on the display.
2. Adjust the hour.

3 Set the minute.
1. Select "CLOCK M."
2. Adjust the minute.

4 Start the clock.

To check the current clock time (changing the display mode)

Press DISP repeatedly. Each time you press the button, the display mode changes as follows.

During tuner operation: Frequency ↔ Clock	During tape operation: Play mode ↔ Clock	During CD operation: Elapsed playing time ↔ Clock
--	---	--

- If the unit is not in use when you press DISP, the power turns on, the clock time is shown for 5 seconds, then the power turns off.

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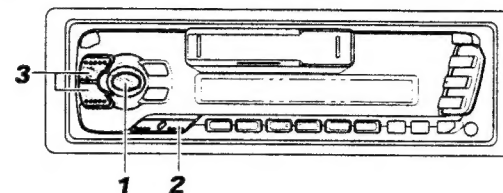


Selecting the level display

You can select the level display according to your preference. When shipped from the factory, the level indicator on the display shows the audio level setting.

AUDIO: Audio level indicator

OFF : Volume level indicator



1 Press and hold SEL for more than 2 seconds.
"CLOCK H," "CLOCK M," "LEVEL" or "AREA" appears on the display.

2 Select "LEVEL" if not shown on the display.

3 Select the desired mode with the button.

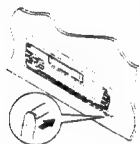
Detaching the control panel

You can detach the control panel when leaving the car. When detaching or attaching the control panel, be careful not to damage the connectors on the back of the control panel and on the panel holder.

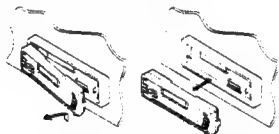
How to detach the control panel

Before detaching the control panel, be sure to turn off the power.

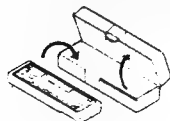
- 1 Unlock the control panel.



- 2 Lift and pull the control panel out of the unit.

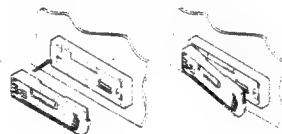


- 3 Put the detached control panel into the provided case.

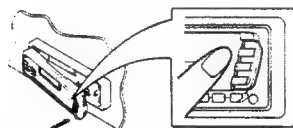


How to attach the control panel

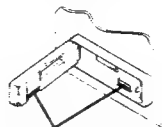
- 1 Insert the left side of the control panel into the groove on the panel holder.



- 2 Press the right side of the control panel to fix it to the panel holder.



Note on cleaning the connectors:
If you frequently detach the control panel, the connectors will deteriorate. To minimize this possibility, periodically wipe the connectors with a cotton swab or cloth moistened with alcohol, being careful not to damage the connectors.



Connectors

ENGLISH

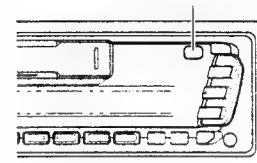
REMOTE OPERATIONS

This section is only for KS-FX440

Before using the remote controller:

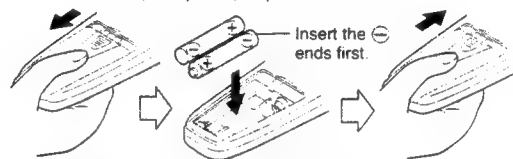
- Aim the remote controller directly at the remote sensor on the main unit. Make sure there is no obstacle in between.
- Do not expose the remote sensor to strong light (direct sunlight or artificial lighting).

Remote sensor



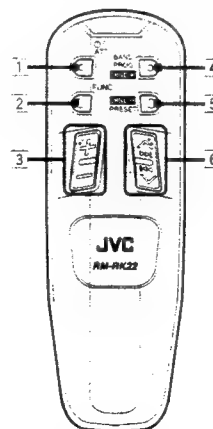
Installing the batteries

R03(UM-4)/AAA(24F)



When the controllable range or effectiveness of the remote controller decreases, replace the batteries – R03(UM-4)/AAA(24F).

Using the remote controller



- 1 Functions the same as the \odot/ATT button on the main unit.
- 2 Selects the source. Each time you press FUNC (function), the source changes.
- 3 * Functions as the +/- buttons on the main unit.
- 4 • Functions as the BAND button while listening to the radio. Each time you press the button, the band changes.
• Functions as the DISC + button while listening to the CD changer. Each time you press the button, the disc number increases, and selected disc starts playing.
• Functions as the PROG button while listening to the tape. Each time you press the button, the tape direction changes.
- 5 • Functions as the PRESET button while listening to the radio. Each time you press the button, the preset station number increases, and selected station is tuned in.
• Functions as the DISC - button while listening to the CD changer. Each time you press the button, the disc number decreases, and selected disc starts playing.
- 6 * • Functions as the station search buttons while listening to the radio.
• Functions as the fast-forward/rewind buttons or the Multi Music Scan buttons while listening to the tape.
• Functions as the fast-forward/reverse buttons or track selecting buttons while listening to the CD changer.

Note:

* These buttons cannot be used for the clock (CLOCK H/M), and FM/AM channel intervals (AREA) adjustments (see pages 15, 8).

CD CHANGER OPERATIONS

Read this section only when you used with a JVC CD automatic changer (separately purchased).

We recommend that you use one of the CH-X series with your unit.

If you have another CD automatic changer, consult your JVC car audio dealer for connections.

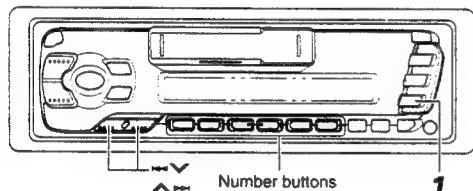
- For example, if your CD automatic changer is one of the KD-MK series, you need a cord (KS-U15K) for connecting it to this unit.

ENGLISH

Before operating your CD automatic changer:

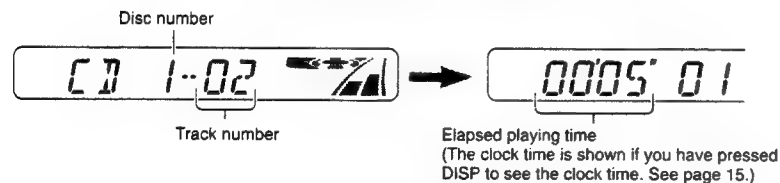
- Refer also to the instructions supplied with your CD changer.
- If no discs are in the magazine of the CD changer or the discs are inserted upside down, "NO CD" or "NO MAG" will appear on the display. If this happens, remove the magazine and set the discs correctly.
- If "RESET 1 - RESET 8" appears on the display, something is wrong with the connection between this unit and the CD changer. If this happens, check the connection, connect the connecting cord(s) firmly if necessary, then press the reset button of the CD changer.

Playing CDs



Select the CD automatic changer.

Play back starts from the first track of the first disc.
All tracks of all discs are played back.

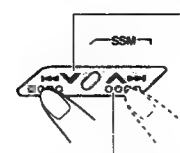


Note on One-Touch Operation:

When you press CD-CH, the power automatically comes on. You do not have to press ATT to turn on the power.



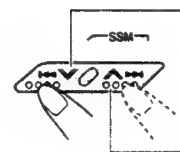
To fast forward or reverse the track



Press and hold , while playing a CD, to reverse the track.

Press and hold , while playing a CD, to fast forward the track.

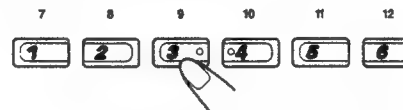
To go to the next track or the previous track



Press briefly, while playing a CD, to go back to the beginning of the current track. Each time you press the button consecutively, the beginning of the previous track is located and played back.

Press briefly, while playing a CD, to go ahead to the beginning of the next track. Each time you press the button consecutively, the beginning of the next track is located and played back.

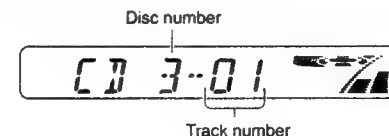
To go to a particular disc directly



Press the number button corresponding to the disc number to start its playback.

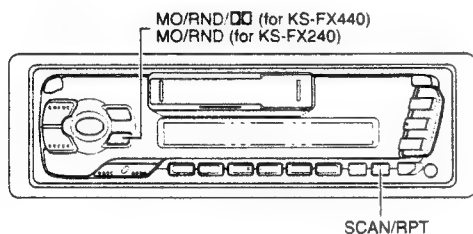
- To select a disc number from 1 - 6:
Press 1 (7) - 6 (12) briefly.
- To select a disc number from 7 - 12:
Press and hold 1 (7) - 6 (12) for more than 1 second.

Ex. When disc number 3 is selected





Selecting CD playback modes



To play back tracks at random (Random Play)



Each time you press MO/RND/DO (mono/random/Dolby NR: for KS-FX440) or MO/RND (mono/random: for KS-FX240) while playing a CD, CD random play mode changes as follows:



Mode	RND Indicator	Plays at random
RND1	Lights	All tracks of the current disc, then the tracks of the next disc, and so on.
RND2	Flashes	All tracks of all discs inserted in the magazine.

To play back tracks repeatedly (Repeat Play)



Each time you press SCAN/RPT (Scan/Repeat) while playing a CD, CD repeat play mode changes as follows:



Mode	RPT Indicator	Plays repeatedly
RPT1	Lights	The current track (or specified track).
RPT2	Flashes	All tracks of the current disc (or specified disc).

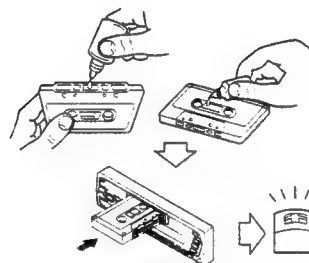
ENGLISH

?! MAINTENANCE

To extend the lifetime of the unit

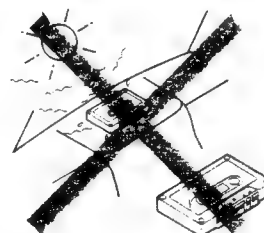
This unit requires very little attention, but you will be able to extend the life of the unit if you follow the instructions below.

To clean the heads



- Clean the heads after every 10 hours of use using a wet-type head cleaning tape (available at an audio store). When the head becomes dirty, you may realize the following symptoms:
 - Sound quality is reduced.
 - Sound level decreases.
 - Sound drops out.
- Do not play dirty or dusty tapes.
- Do not touch the highly-polished head with any metallic or magnetic tools.

To keep the tape clean



- Always store the tapes to their storage cases after use.
- Do not store tapes in the following places:
 - Subject to direct sunlight
 - With high humidity
 - At extremely hot temperatures

CAUTIONS:

- Do not play the tapes with peeling labels; otherwise, they can damage the unit.
- Tighten tapes to remove slack since loose tape may become entangled with the mechanism.
- Do not leave a cassette in the cassette compartment after use, as the tape may become slack.

The function below is also provided to ensure the longer life of this unit.

Ignition key-off Release/Ignition key-on play

- When you turn off the ignition key with a cassette in the compartment, the unit automatically releases the tape from its head.
- When you turn on the ignition key with a cassette in the compartment, playback automatically starts.

!! SPECIFICATIONS

AUDIO AMPLIFIER SECTION

Maximum Power Output:

Front: 40 watts per channel

Rear: 40 watts per channel

Continuous Power Output (RMS):

Front: 16 watts per channel into 4 Ω , 40 to 20,000 Hz at no more than 0.8% total harmonic distortion.

Rear: 16 watts per channel into 4 Ω , 40 to 20,000 Hz at no more than 0.8% total harmonic distortion.

Load Impedance: 4 Ω (4 to 8 Ω allowance)

Tone Control Range

Bass: ± 10 dB at 100 Hz

Treble: ± 10 dB at 10 kHz

Frequency Response: 40 to 20,000 Hz

Signal-to-Noise Ratio: 70 dB

Line-Out Level/Impedance: 1.0 V/20 k Ω load (250 nWb/m)

TUNER SECTION

Frequency Range

FM: 87.5 to 107.9 MHz

(with channel interval set to 200 kHz)

87.5 to 108.0 MHz

(with channel interval set to 50 kHz)

AM: 530 to 1,710 kHz

(with channel interval set to 10 kHz)

531 to 1,602 kHz

(with channel interval set to 9 kHz)

[FM Tuner]

Usable Sensitivity: 11.3 dBf (1.0 μ V/75 Ω)

50 dB Quieting Sensitivity:

16.3 dBf (1.8 μ V/75 Ω)

Alternate Channel Selectivity (400 kHz):

65 dB

Frequency Response: 40 to 15,000 Hz

Stereo Separation: 35 dB

Capture Ratio: 1.5 dB

[AM Tuner]

Sensitivity: 20 μ V

Selectivity: 35 dB

CASSETTE DECK SECTION

Wow & Flutter: 0.11% (WRMS)

Fast-Wind Time: 100 sec. (C-60)

Frequency Response:

50 to 16,000 Hz (± 3 dB)

Signal-to-Noise Ratio: (Normal tape)

(Dolby B NR-ON):

64 dB (For KS-FX440 only)

(Dolby B NR-OFF): 56 dB

Stereo Separation: 40 dB

GENERAL

Power Requirement

Operating Voltage: DC 14.4 volts (11 to 16 volts allowance)

Grounding System: Negative ground

Dimensions (W x H x D)

Installation Size:

182 x 52 x 150 mm

(7-3/16" x 2-1/16" x 5-15/16")

Panel Size: 188 x 58 x 14 mm

(7-7/16" x 2-5/16" x 5/8")

Mass: 1.4 kg (3.1 lbs) (excluding accessories)

Design and specifications subject to change without notice.

If a kit is necessary for your car, consult your telephone directory for the nearest car audio specialty shop.

TROUBLESHOOTING !!

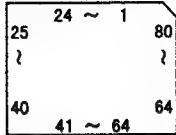
What appears to be trouble is not always serious. Check the following points before calling a service center.

Symptoms	Causes	Remedies
• A cassette tape cannot be inserted.	You have tried to insert a cassette in the wrong way.	Insert the cassette with the exposed tape facing right.
• Cassette tapes become hot.	This is not a malfunction.	—————
• Tape sound is at very low level and sound quality is degraded.	The tape head is dirty.	Clean it with a head cleaning tape.
• Sound is sometimes interrupted.	Connections are not good.	Check the cords and connections.
• Sound cannot be heard from the speakers.	The volume control is turned to the minimum level.	Adjust it to the optimum level.
	Connections are incorrect.	Check the cords and connections.
• SSM (Strong-station Sequential Memory) automatic preset does not work.	Signals are too weak.	Store stations manually.
• Static noise while listening to the radio.	The antenna is not connected firmly.	Connect the antenna firmly.
• "NO CD" or "NO MAG" appears on the display.	No CD is in the magazine.	Insert CDs into the magazine.
	CDs are inserted incorrectly.	Insert them correctly.
• "RESET 8" appears on the display.	This unit is not connected to a CD changer correctly.	Connect this unit and the CD changer correctly and press the reset button of the CD changer.
• "RESET 1-RESET 7" appears on the display.	—————	Press the reset button of the CD changer.
• The unit does not work at all.	The built-in microcomputer may function incorrectly due to noise, etc.	Press \odot /1 ATT and SEL at the same time for more than 2 seconds to reset the unit. (The clock setting and preset stations stored in memory are erased.)

Discription of Main IC's

■ LC72362N-9486(IC701):System Controller

1. Terminal Layout



2. Description

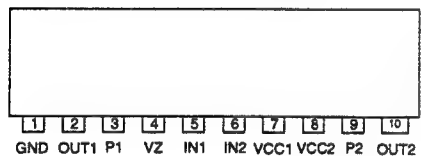
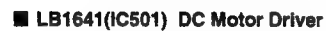
Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	XIN	I	Crystal oscillator	41	MOTOR	O	Main motor control output
2	GND	-	To GND	42	SUBMO+	O	Sub motor control output (+)
3	J BUS SI	I	Bus serial data input from CP751	43	SUBMO-	O	Sub motor control output (-)
4	J BUS SO	O	Bus serial data output to CP751	44	BEEP	-	Non connect
5	J BUS SCK	O	Bus serial clock output to CP751	45	TAPE.IN	I	TAPE in detector input
6	J BUS I/O SEL	O	BUS I/O switch signal output	46	STANDBY	I	STANDBY switch detector input
7	NC	-	Non connect	47	TAPE.END	I	TAPE END switch detector input
8	LCD SO	O	Serial data output to IC651	48	MODE	I	Position detection input of Mecha mode
9	LCD SCK	O	Serial clock output to IC651	49	F/R SENSE	I	FORWARD/REVERSE switch detector
10	LCD CE	O	Chip enable output to IC651	50	MS.IN	I	Music sensor input
11	NC	-	Non connect	51	SD/ST	I	Station detector and ST input
12	E.VOL SO	O	Serial data output	52	NC	-	Non connect
13	E.VOL SCK	O	Serial clock output	53	DETACH	-	To GND
14	NC	-	Non connect	54	NC	-	Non connect
15	TUNER ILLUM	-	Non connect	55	J BUS INT	I	BUS interruption signal detection communication
16	TAPE ILLUM	-	Non connect	56	REMOCON	-	To GND
17	CD ILLUM	-	Non connect	57	FM/AM	I	Change over the FM/AM input
18	DIMMER OUT	-	Non connect	58	DOLBY	-	Non connect
19	NC	-	Non connect	59	NC	-	Non connect
20	NC	-	Non connect	60	MUTE	-	The mute time is controlled by the connected capacitor when changing over the FM/AM
21	NC	-	Non connect				
22	NC	-	Non connect				
23	NC	-	Non connect	61	MEMORY DET	I	Memory detector input
24	NC	-	Non connect	62	LEVEL METER	I	Level memory input
25	KS1	-	Non connect	63	SMETER	I	Signal meter input
26	KS0	O	Initializing output port	64	KEY 2	I	Momentary key input
27	K3	I	Initializing input port	65	KEY1	I	Momentary key input
28	K2	I	Initializing input port	66	KEY0	I	Momentary key input
29	K1	-	Non connect	67	ACCDET	-	Power supply
30	K0	I	Initializing input port	68	SENS	-	To GND
31	Vdd	-	Power supply	69	AM IF COUNT	-	Non connect
32	TEST	I	Test input	70	FM IF COUNT	I	AM/FM Frequency detection
33	FF/REW MODE	O	H is output during FF/REW when the TAPE is OFF	71	NC	-	Non connect
34	SEEK/STOP	O	Output the "If signal request"	72	NC	-	Non connect
35	MONO	O	Monaural and stereo change over output	73	Vdd	-	Power supply
36	RADIO/TAPE	-	Non connect	74	AM OSC	I	Input the local oscillator signal of AM
37	BEEP LEVEL	-	Non connect	75	FMOSC	I	Input the local oscillator signal of FM
38	POWER CNT	O	Power control output	76	Vss	-	Power supply
39	Acc	-	Power supply	77	NC	-	Non connect
40	KICK	O	Driving voltage control terminal of motor	78	ED	O	PLL Error signal output
				79	TEST 1	-	To GND
				80	XOUT	O	Crystal oscillator

3.Pin Functions

Pin No.	Symbol	I/O	Functions
1	SDA	I/O	Serial data input/output.
2	GND	-	Ground.
3	OUTLR	O	output left rear.
4	OUTLF	O	output left front.
5	TL	I	Treble control capacitor left channel or input from an external equalizer.
6	B2L	-	Bass control capacitor left channel or output to an external equalizer.
7	B1L	-	Bass control capacitor left channel.
8	IVL	I	Input volume 1, left control part.
9	ILL	I	Input loudness, left control part.
10	QSL	O	Output source selector, left channel.
11	IDL	-	Not used
12	MUTE	-	Not used
13	ICL	I	Input C left source.
14	IMO	-	Not used
15	IBL	I	Input B left source.
16	IAL	I	Input A left source.
17	IAR	I	Input A right source.
18	IBR	I	Input B right source.
19	CAP	-	Electronic filtering for supply.
20	ICR	I	Input C right source.
21	Vref	-	Reference voltage (0.5Vcc)
22	IDR	-	Not used
23	QSR	O	Output source selector right channel.
24	ILR	I	Input loudness right channel.
25	IVR	I	Input volume 1, right control part.
26	B1R	-	Bass control capacitor right channel
27	B2R	O	Bass control capacitor right channel or output to an external equalizer.
28	TR	I	Treble control capacitor right channel or input from an external equalizer.
29	OUTRF	O	Output right front.
30	OUTRR	O	Output right rear.
31	Vcc	-	Supply voltage.
32	SCL	I	Serial clock input.

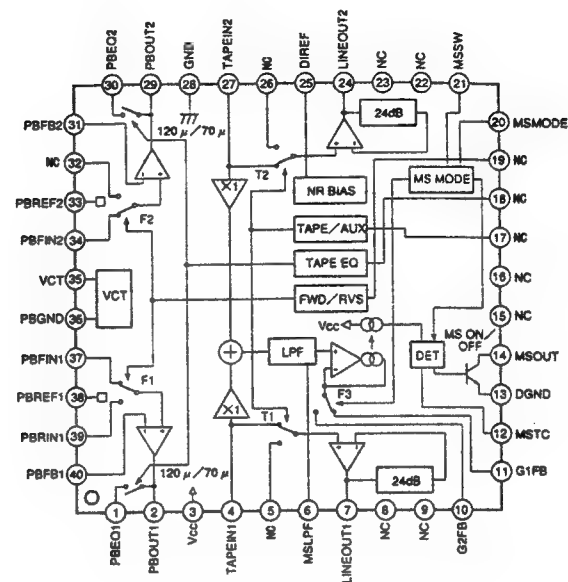


■ **CXA2509AQ(IC901):Cassette Mecha Controller**



FUNCTION

Input		Output		Mode
IN1	IN2	OUT1	OUT2	
0	0	0	0	Brake
1	0	1	0	CLOCKWISE
0	1	0	1	COUNTER-CLOCKWISE
1	1	0	0	Brake



■CXA2510AQ(IC901):Head AMP/Dolby

1. Block Diagram and Pin Configuration

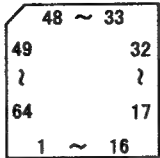


■ IC901 : CXA2510AQ (Head AMP/Dolby)

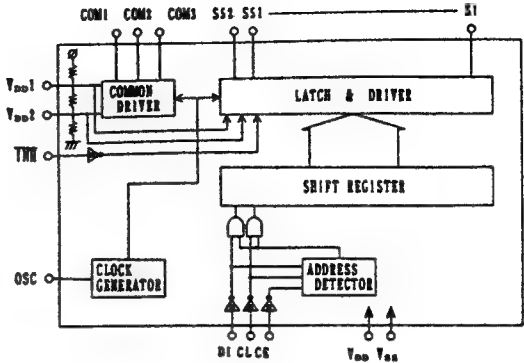
Pin No.	Symbol	I/O	Functions
1	PBEQ1	O	Resistance for selecting the equalizer amplifier time constant.
2	PBOUT1	O	Playback equalizer amplifier out put.
3	Vcc	-	Power supply
4	TAPEIN1	I	TAPE input.
5	AUXIN1	I	External input.
6	MSLPF	-	Cut-off frequency adjustment of the music sensor LPF.
7	LINEOUT1	O	Line out.
8	TCH1	-	Time constant for the HLS.
9	TCL1	-	Time constant for the LLS.
10	G2FB	-	Music signal interval detection level setting.
11	G1FB	-	
12	MSTC	-	Time constant for detecting the music signal interval.
13	DGND	-	Logic ground(Connect to GND)
14	MSUOT	O	Music sensor output.
15	NRMODE	I	Dolby NR modecontrol L:Dolby B type NR H:Dolby C type NR
16	NRSW	I	Dolby NR control L:NR OFF H:NR ON
17	INSW	I	Line amplifier input select control L:TAPE IN H:AUX IN
18	TAPESW	I	Playback equalizer amplifier control L:120us H:70us
19	DRSW	I	Head select control L:FORWARD H:REVERSE
20	MSMODE	I	Music sensor mode control Low(open):G1 High:G2
21	MSSW	I	Music sensor control Low(open):MS on High:MS OFF
22	TCL2	-	Time constant for the LLS
23	TCH2	-	Time constant for the HLS
24	LINEOUT2	O	Line output
25	DIREF	-	Resistance for setting the reference current(Connects 20(18)KΩ between DIREF pin and GND for the standard setting.)
26	AUXIN2	I	External input.
27	TAPEIN2	I	TAPE input.
28	GND	-	To ground.
29	PBOUT2	O	Playback equalizer amplifier output.
30	PBEQ2	O	Resistance for selecting the playback equalizer amplifier time constant
31	PBFB2	I	Playback equalizer amplifier feedback.
32	PBRIN2	I	Playback equalizer amplifier input(REVERSE head connected)
33	PBREF2	O	Playback equalizer amplifier reference(Vcc/2 output)
34	PBFIN2	I	Playback equalizer amplifier input(FORWARD head connected)
35	VCT	O	Center(Vcc/2 output)
36	PBGND	-	Playback equalizer amplifier ground(Connect to ground)
37	PBFIN1	I	Playback equalizer amplifier input (FORWARD head connected)
38	PBREF1	O	Playback equalizer amplifier reference(Vcc/2 output)
39	PBRIN1	I	Playback equalizer amplifier input(REVERSE head connected)
40	PBFB1	I	Playback equalizer amplifier feedback.

■ LC75823E(IC651):LCD DRIVER

1.Terminal Layout



2.Block Diagram



3.Pin Function

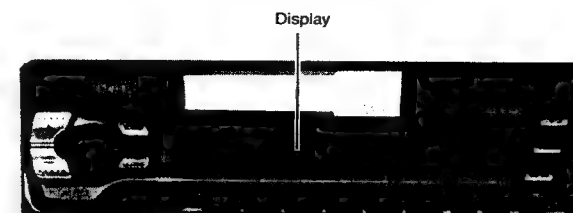
PIN No.	Symbol	I/O	Functions
1~9		-	NOT USED
10~52	S10~S52	O	Segment outputs that display data transferred from serial data.
53~55	COM1~COM3	O	The frame frequency (fo) for the common driver output is (fosc/384)Hz.
56	VDD	-	Power supply
57	/INH	I	Forcibly turns off the display, regardless of internal data. Serial data can be input, whether this pin is high or low
58		-	NOT USED
59		-	
60	VSS	-	To GND
61	OSC	I	Oscillator connection (for the common segment alternating waveform)
62	CE	I	Serial data transfer
63	CL	I	pins.connected to a
64	DI	I	microprocessor.

CE : Chip enable
CL : Sync.clock
DI : Transfer data

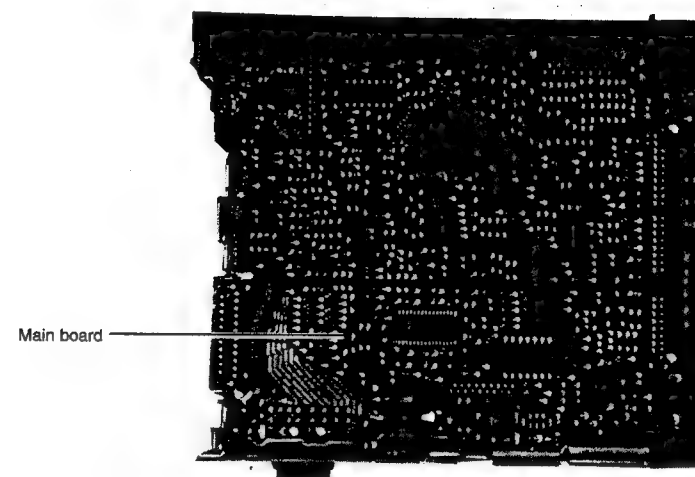
<<MEMO>>

Location of Main Parts

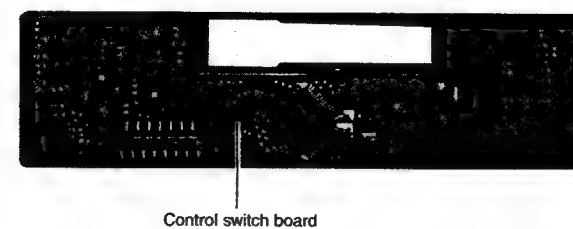
◆ Control unit



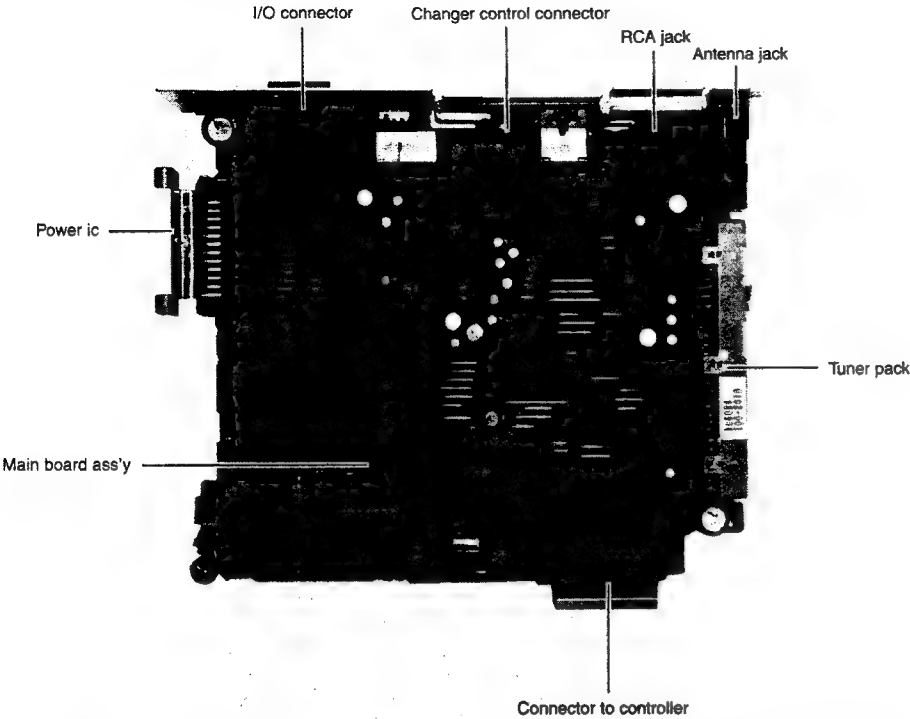
◆ Main unit (bottom side view)



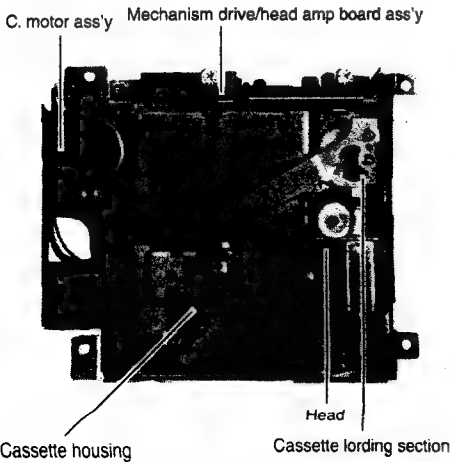
◆ Control unit (inside view)



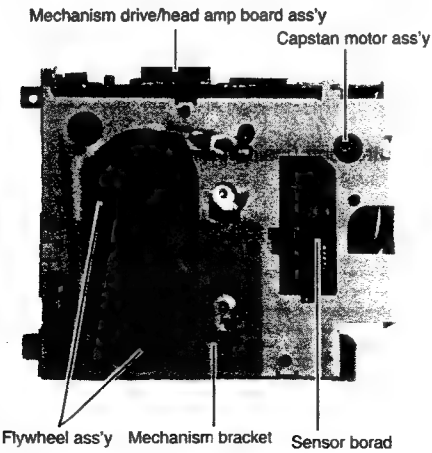
◆ Main board unit (top side view)



◆ Cassette mechanism unit (top view)



◆ Cassette mechanism unit (bottom view)



Disassembly Method

■ Enclosure section

- ◆ **Detaching the front panel unit** (See Fig. 1)
Push the Release push knob in the direction of arrow to detach the front panel unit.

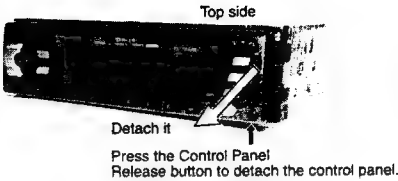


Fig. 1

- ◆ **Removing the front chassis** (See Fig. 2)
Disengage the four pawls in the right and left sides of unit and pull the front chassis forward to remove it.

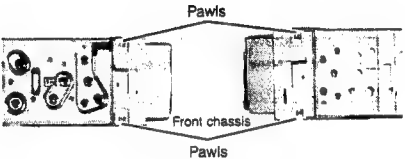


Fig. 2

- ◆ **Removing the heat sink** (See Fig. 3)
1. Remove one screw ① retaining the IC to the heat sink.
2. Remove two screws ② to remove the heat sink.

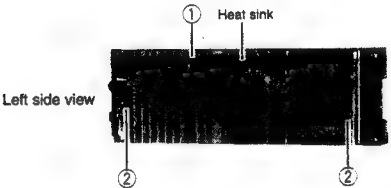


Fig. 3

- ◆ **Removing the bottom cover** (See Fig. 4)
Turn the unit upside down, then insert and turn the screwdriver to remove the bottom cover.

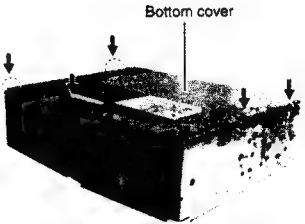


Fig. 4

◆ Removing the main P. C. B. assembly (with rear panel) (See Figs. 5 and 6)

1. Remove two screws ③ retaining the rear panel to the chassis.
2. Remove two screws ④ retaining the main P. C. B. assembly.
3. Lift up the main P. C. B. assembly to remove it. At this time, remove the connector CP702 connecting the main P. C. B. assembly and mechanism assembly.

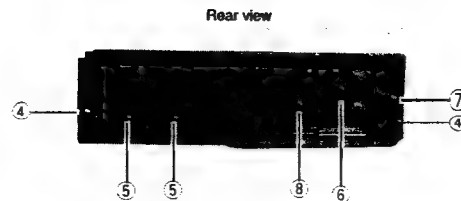


Fig. 5

◆ Removing the rear panel (See Fig. 5)

- Remove five screws retaining the jacks or the like.
Remove two screws ⑤ to remove the 16-pin jack.
Remove one screw ⑥ to remove the line-out jack.
Remove one screw ⑦ to remove the antenna jack.
Remove one screw ⑧ to remove the changer controller jack.

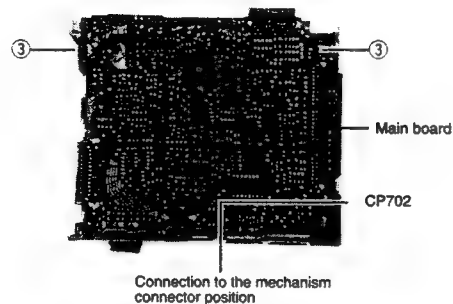


Fig. 6

◆ Mechanism assembly (See Fig. 7)

- Remove four mechanism mounting screws ⑨ retaining the top cover.

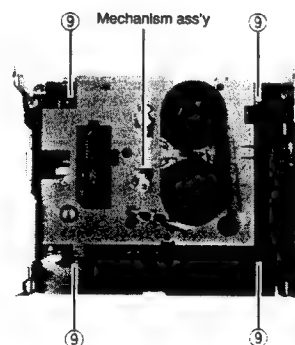


Fig. 7

◆ Front panel unit (See Fig. 8)

- Remove four screws ⑩ retaining the rear cover.

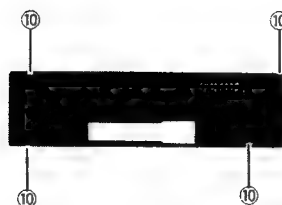


Fig. 8

■ Mechanism section

◆ Removing Mechanism drive/head amp PCB

1. Remove one screw ① to remove the mechanism bracket. (Fig. 9)
2. Remove the connector CP502 Mechanism drive/head amp PCB and head relay PCB. (Fig. 9)
3. Shift the interlocking section ② securing the mechanism drive/head amp PCB in the direction shown by the arrow A to remove the Mechanism drive/head amp PCB. (Fig. 9)
4. Remove the connector CJ503 connecting Mechanism drive/head amp PCB and head relay PCB. (Fig. 9)

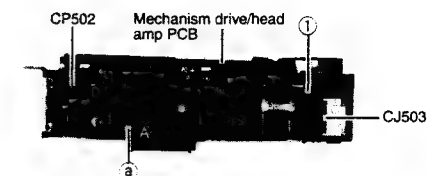


Fig. 9

◆ Removing the Cassette mechanism

- Remove four screws ② to remove the Mechanism bracket. (Fig. 10)

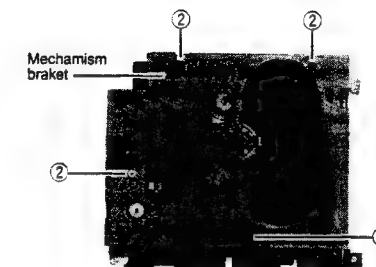


Fig. 10

◆ Removing the head relay PCB

1. Desolder the lead wires of the loading motor at the 2 positions shown (red, black). (Fig. 11)
2. Desolder the lead wires of the head at the 3 positions shown (red, yellow, black). (Fig. 11)
3. Remove the three screws ③ securing the head relay PCB. (Fig. 11)
4. Shift the interlocking section ④ securing the head relay PCB in the direction shown by the arrow B to remove the PCB. (Fig. 11)

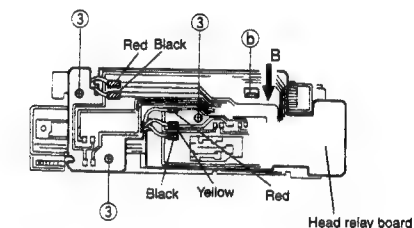


Fig. 11

◆ Removing the load arm assembly

1. Using tweezers, detach the Mylar washer ⑤ securing the load arm assembly and pull out the load arm assembly. (Fig. 12)
Note: When reassembling, be sure to use a new Mylar washer.
2. Shift the load arm assembly counterclockwise. (Fig. 12)
3. Remove the load arm assembly from the catch (K). (Fig. 12)

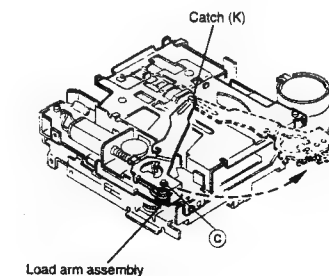


Fig. 12

◆ **Removing the cassette holder and holder arm assembly**

1. Remove the head relay PCB.
2. Remove the load arm assembly.
3. Apply DC 6 V to the lead wire of the loading motor assembly and turn the load gear assembly to the position shown in Fig. 13.
4. Remove the one screw ④ securing the cassette holder and holder arm assembly. (Fig. 13)
5. Shift the cassette holder and the holder arm assembly in the direction shown by the arrow C and remove them from the interlocking section ④ of the sub chassis assembly. (Fig. 13)

◆ **Removing the sub chassis assembly**

1. Remove the head relay PCB.
 2. Remove the load arm assembly.
 3. Remove the cassette holder and holder arm assembly.
 4. Remove the two screws ⑤ and ⑥ securing the sub chassis assembly. (Fig. 13)
- Note: When removing the sub chassis assembly, the mode gear may become detached. In this case, set it back to the original position.

◆ **Removing the play head (Fig. 14)**

1. Remove the head relay PCB.
2. Remove the load arm assembly.
3. Remove the cassette holder and holder arm assembly.
4. Remove the sub chassis assembly.
5. Disengage the spring holding the play head down.
6. Remove the two screws ⑦ securing the play head.

◆ **Removing the pinch roller assembly (Figs. 15 and 16)**

1. Remove the head relay PCB.
 2. Remove the load arm assembly.
 3. Remove the cassette holder and holder arm assembly.
 4. Remove the sub chassis assembly.
 5. Detach the Mylar washers ⑧ at the two positions securing the right and left pinch roller assemblies.
- Note: When reassembling, be sure to use new Mylar washers. Also, make sure that grease is not adhering to the pinch rollers.
6. Pull out the pinch rollers.

◆ **Removing the reel disk assembly (Fig. 17)**

1. Remove the head relay PCB.
 2. Remove the load arm assembly.
 3. Remove the cassette holder and holder arm assembly.
 4. Remove sub chassis assembly.
 5. Detach the Mylar washer ① from the tip by first pressing down the reel feather to expose it.
- Note: When reassembling, be sure to use a new Mylar washer.

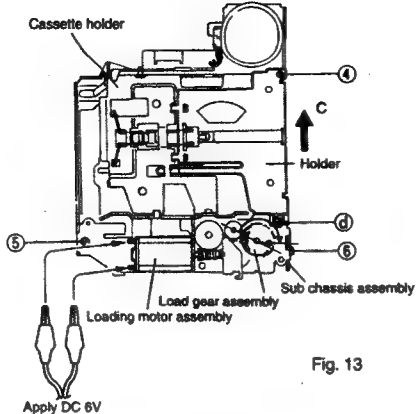


Fig. 13

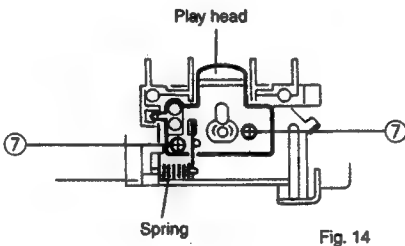


Fig. 14

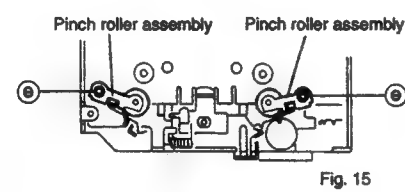


Fig. 15

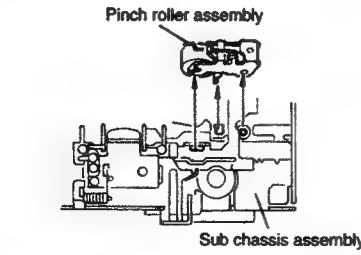


Fig. 16

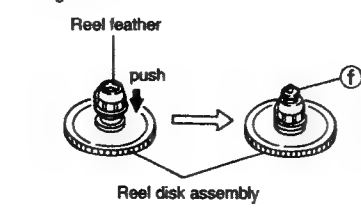


Fig. 17

◆ **Removing the head plate (Figs. 18 and 19)**

1. Remove the head relay PCB.
 2. Remove the load arm assembly.
 3. Remove the cassette holder and holder arm assembly.
 4. Remove the sub chassis assembly.
 5. Remove the right and left pinch roller assembly.
 6. From the rear of the head plate, detach the Mylar washer ⑨ and the washer pressing the forward/reverse plate down. (Fig. 18)
 7. Remove the head plate.
 8. Pull out the mode gear. (Fig. 19)
- Note: When installing the mode gear, set it to the arrow mark.

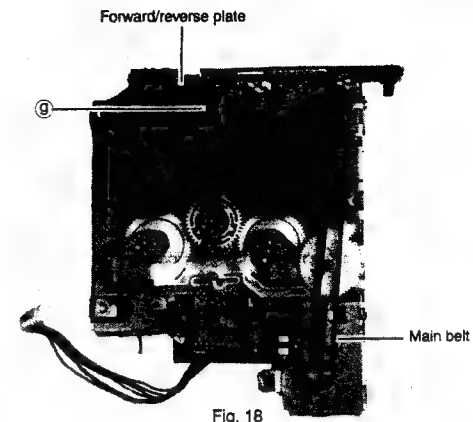


Fig. 18

◆ **Removing the flywheel assembly (Fig. 18 and 19)**

1. Remove the head relay PCB.
2. Remove the load arm assembly.
3. Remove the cassette holder and holder arm assembly.
4. Remove the sub chassis assembly.
5. Remove the head plate.
6. Disengage the main belt from the flywheel assembly. (Fig. 18)
7. Remove E washers ① at the two positions which secure the capstan shaft away from the surface. (Fig. 19)
8. Pull out the flywheel assembly from the rear.

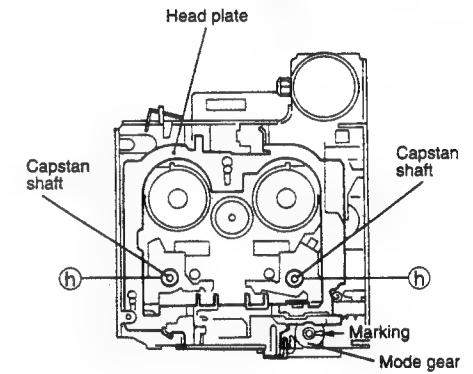


Fig. 19

◆ **Removing the reel disk PCB (See Fig. 20)**

1. Remove the head relay PCB.
2. Remove the load arm assembly.
3. Remove the cassette holder and the holder arm assembly.
4. Remove sub chassis assembly.
5. Straighten the curved tab ① securing the reel disk PCB. (Fig. 20)
6. Remove the two screws ② fixing the reel disk PCB. (Fig. 20)
7. Remove the reel disk PCB.

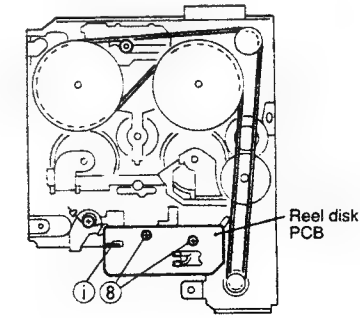


Fig. 20

◆ Removing the loading motor assembly

1. Remove the head relay assembly.
2. Remove the load arm assembly.
3. Remove the Mylar washer ① fixing the worm gear.

(Fig. 21)

Note: When reassembling, be sure to use a new Mylar washer.

4. Remove the one screw ⑨ fixing the loading motor assembly. (Fig. 21)
5. Remove the two screws ⑩ fixing the loading motor assembly. (Fig. 21)

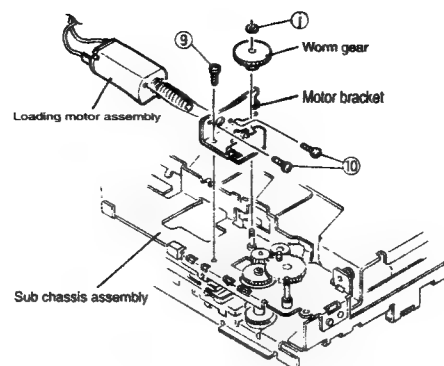


Fig. 21

● (Procedures for reassembling)

1. Insert the mode gear into the sub chassis assembly.
2. Install the sub chassis assembly and secure it with the two screws ⑤ and ⑥ as shown in (Fig. 22).

Note: The set arm assembly and the mode gear should be positioned as shown in Fig. 22.

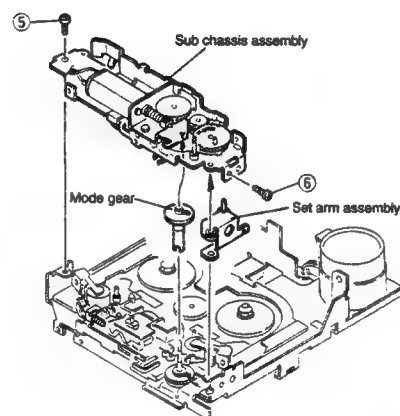


Fig. 22

3. Attach the cassette holder as shown in Fig. 23. In this case, first pass the tab of the section ⑧ through the mechanism ①, then attach the cassette holder in the direction shown by the arrow.

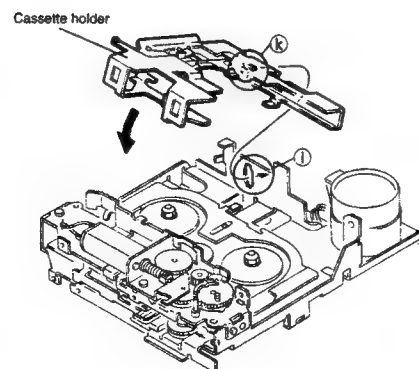


Fig. 23

4. Set the catch (K) to the holder arm assembly as shown in Fig. 24.

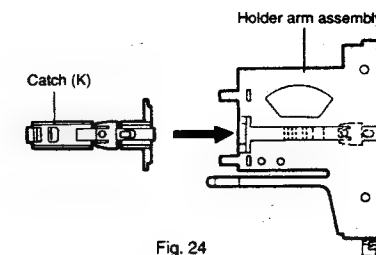


Fig. 24

5. While attaching the holder arm assembly to the cassette holder, insert the shaft of the holder arm assembly into the interlocking section ④ of the sub chassis assembly as shown in Fig. 25.
6. Install the spring attached to the holder arm assembly shaft over the set arm assembly as shown in Fig. 26.
7. After the holder arm assembly is installed, secure it with the screw ③. (Fig. 25)

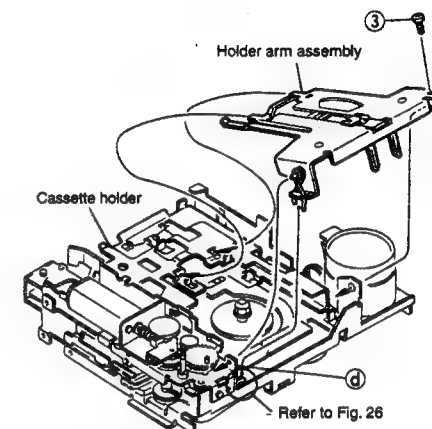


Fig. 25

8. After the installation, apply DC 5 V to the lead wires of the loading motor assembly to locate the load gear assembly as shown in Fig. 27.
9. Install the load arm assembly.
10. Install the head relay PCB.

Note: Install it so that the slide switch lever of the head relay PCB is set in the PCB stay hook of the sub chassis assembly. (Fig. 28a)

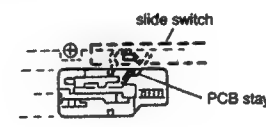


Fig. 28a

11. Solder the loading motor and head lead wires to the head relay PCB, respectively. (Fig. 28)

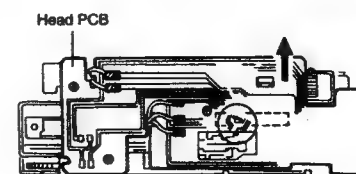


Fig. 28

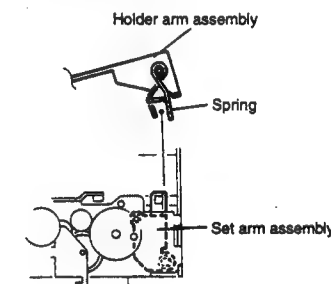


Fig. 26

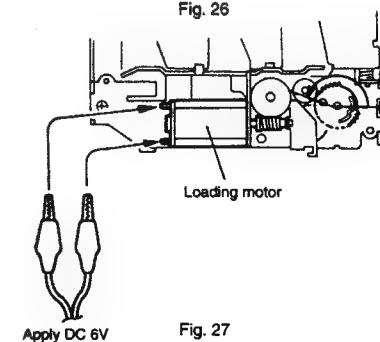


Fig. 27

Adjustment Method

Equipment and measuring instruments used for adjustment

- Electronic voltmeter
- Audio frequency oscillator
(range : 50-20kHz and output 0 dB with impedance of 600 Ω)
- Attenuator (impedance ; 600 Ω)
- Frequency counter
- AM Standard signal generator
- FM Standard signal generator
- Wow flutter meter
- Torqu testing cassette gauge
CTG - N (mechanical adjusting)
TW - 2111A (FWD play)
TW - 2121A (REV play)
- Standard tape
VT712 or VTT712 (tape speed, wow & flutter adj.)
VT724 or VTT724 (reference level)
VT738 or VTT736 (playback frequency response)
VT721 or VTT721 (output level)
VT703 or VTT703 (azimuth) (10kHz part only)

Condition for measurement

- Power supplyDC14.4V
(Reduced Voltage ; 10.5V)
- Load4 Ω
(4-speakers connection)
- BASS/TRE, FADER Indication 0
- Main volume Position with an output level of 2V during VTT721 playback
- Tuner section
Frequency bund (KS-FX440/FX240)

Band	Saffix Area	Frequency	
FM	J	87.5 ~ 107.9MHz	200kHz step
	U	87.5 ~ 108MHz	50kHz step
	E	87.5 ~ 108MHz	
MW	J	530 ~ 1710kHz	10kHz step
	U	531 ~ 1602kHz	9kHz step
	E	522 ~ 1620kHz	
LW KS-FX240only	E	144 ~ 279kHz	

- **FM** ; 400Hz, 22.5kHz deviation (MONO)
- **FM** STEREO ; 1kHz, 67.5kHz deviation.
pilotsignal 7.5kHz, 66dB μ V
- **AM** ; 400Hz,30% modulation, 74dB μ V
- Output impedance ; 50 Ω

Information for using a Car Stereo service jig (for adjustment and checking)

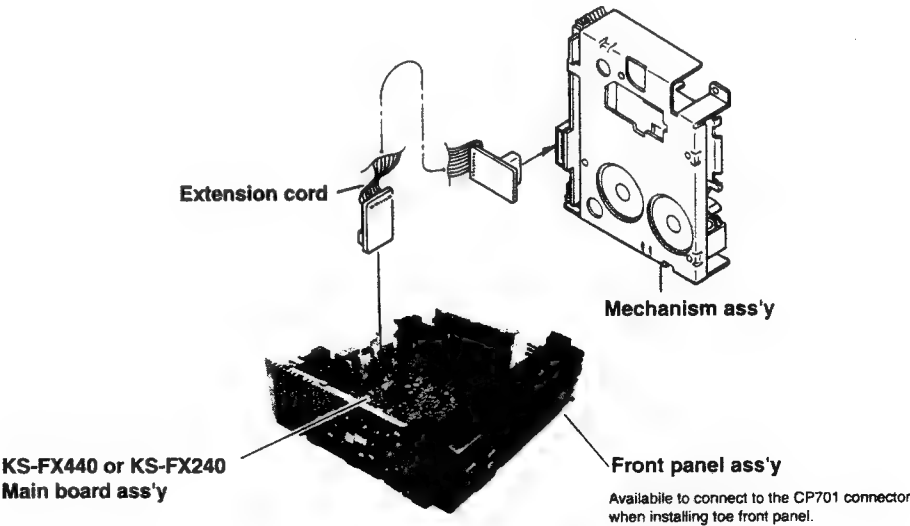
- ◆ For 1995 and 1996, we're advancing efforts to make our extension cords common for all Car Stereo products. Please use this type of extension cord as follows.
- ◆ As a U - shape type top cover is employed, this type of extension cord is needed to check operation of the mechanism assembly after disassembly.
- ◆ Extension cords



EXTKSRT002-18P (18 pin extension cord)

For connection between mechanism assembly and main PCB assembly.
Check for mechanism-driving section such as motor, etc.

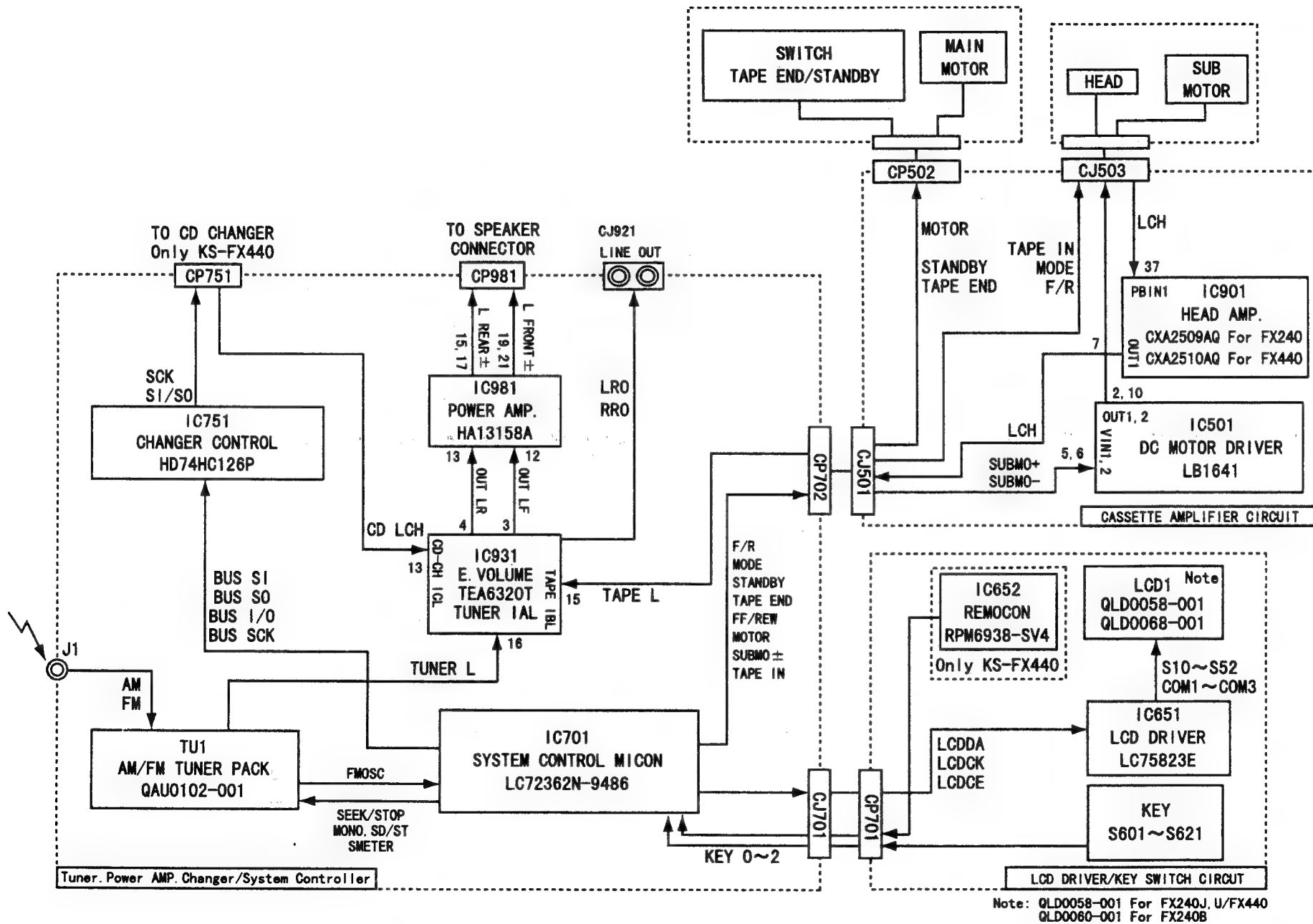
- ◆ Disassembly method (Refer to method to remove main parts)
 1. Remove the bottom cover.
 2. Remove the front panel assembly.
 3. Remove the top cover. (Remove the screws at each side of heat sink and rear panel.)
 4. Install the front panel (whose assembly was removed in step 2) to the main unit.
 5. Confirm that current is being carried by connecting an extension cord jig.
- ◆ Connection diagram



Item	Conditions	Adjustment and Confirmation methods	S. Values	Adjust
1. Head azimuth adjustment	Test tape: SCC-1659 VT703 (10kHz)	<p>◆ Head height adjustment</p> <p>※ Adjust the azimuth directly. When you adjust the height using a mirror tape, remove the cassette housing from the mechanism chassis. After installing the cassette housing, perform the azimuth adjustment.</p> <ol style="list-style-type: none"> Load the SCC-1659 mirror tape. Adjust with height adjustment screw A and azimuth adjustment screw B so that line A of the mirror tape runs in the center between Lch and Rch in the reverse play mode. After switching from REV to FWD then to REV, check that the head position set in procedure 1 is not changed. (If the position has shifted, adjust again and check.) Adjust with azimuth adjustment screw B so that line B of the mirror tape runs in the center between Lch and Rch in the forward play mode. <p>◆ Head azimuth adjustment</p> <ol style="list-style-type: none"> Load VTT724 (VT724) (1kHz) and play it back in the reverse play mode. Set the Rch output level to max. Load VTT703 (VT703) (10kHz) and play it back in the forward play mode. Adjust the Rch and Lch output levels to max, with azimuth adjustment screw B. In this case, the phase difference should be within 45°. Engage the reverse mode and adjust the output level to max, with azimuth adjustment screw C. (The phase difference should be 45° or more.) When switching between forward and reverse modes, the difference between channels should be within 3 dB. (Between FWD L and R, REV L and R) When VTT721 (VT721) (315Hz) is played back, the level difference between channels should be within 1.5dB. 	<p>S. Values</p>	<p>Adjust</p> <div data-bbox="802 199 988 295"> <p>A Line</p> <p>Head shield</p> </div> <p>The head is at low position during FWD.</p> <div data-bbox="802 399 988 494"> <p>B Line</p> <p>Head shield</p> </div> <p>The head is at high position during REV.</p> <p>Output level: Maximum</p> <div data-bbox="769 550 1015 774"> </div> <div data-bbox="775 861 999 1005"> <p>(0°) phase (45°)</p> </div>
2. Tape speed and wow flutter confirmation	Test tape: VTT712 (3kHz)	<ol style="list-style-type: none"> Check to see if the reading of the F₁ counter/wow flutter meter is within 3015 ~ 3045 (FWD/REV), and less than 0.35% (JIS RMS). In case of out of specification, adjust the motor with a built-in volume resistor. 	<p>Tape speed: 3015 ~ 3045Hz Wow flutter: less than 0.35%</p>	<p>Built-in volume resistor</p>
3. Playback frequency response confirmation	Test tape: VTT724 (1kHz) VTT739 (63kHz/1kHz/10kHz)	<ol style="list-style-type: none"> Play test tape VTT724, and set the volume position at 2 V. Play test tape VTT739 and confirm. 1kHz/10kHz: -1 ± 3dB. 1kHz/63kHz: 0 ± 3dB. When 10kHz is out of specification, it will be necessary to read adjust the azimuth. 	<p>Speaker out 1kHz/63Hz : 0 ± 3dB 1kHz/10kHz : -1 ± 3dB</p>	

The tuner section is of an adjustment-free design. In case the tuner is in trouble, replace the tuner pack.

Block Diagram



Note: QLD0058-001 For FX240J, U/FX440
QLD0068-001 For FX240B

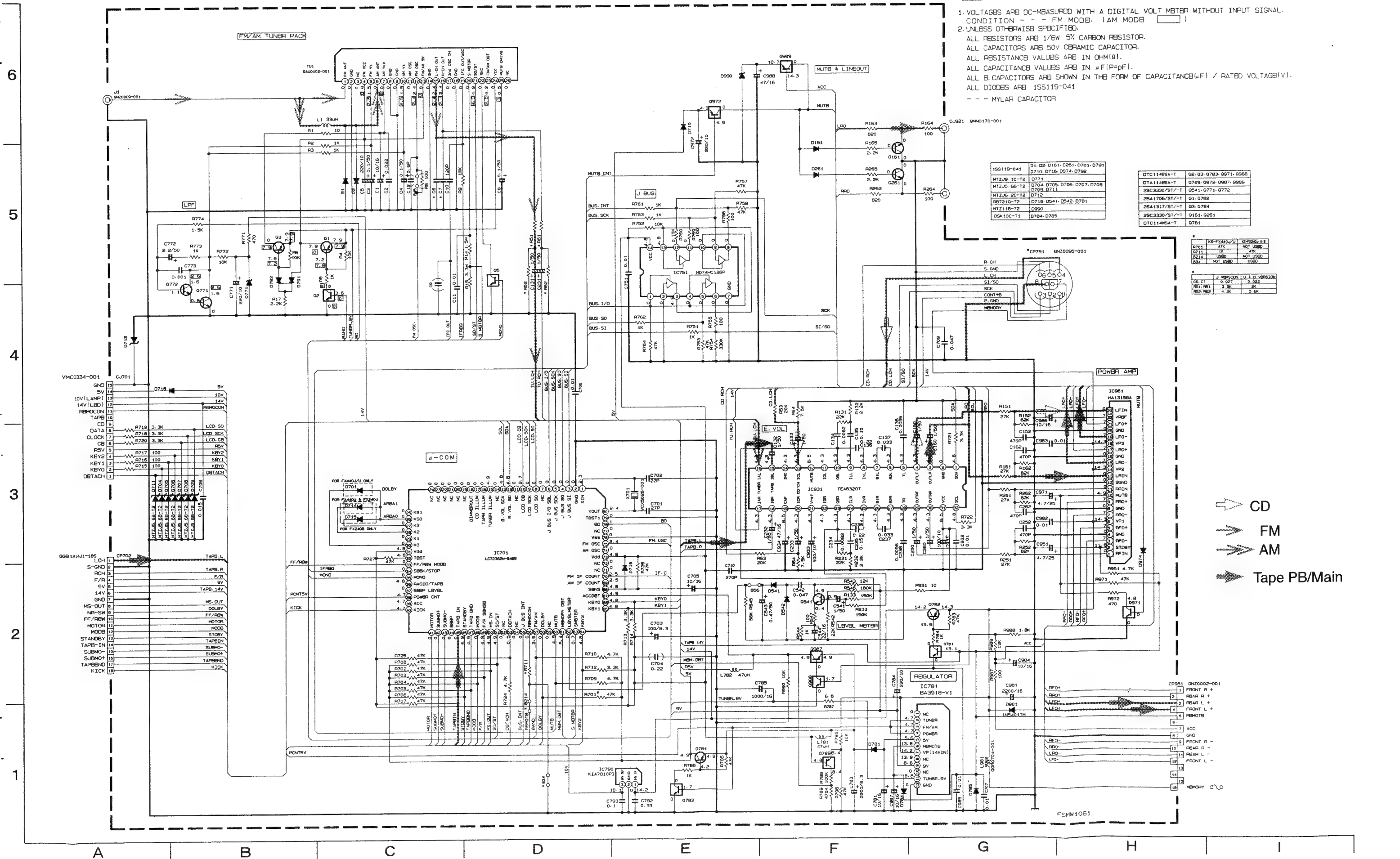
KS-FX440
KS-FX240

KS-FX440
KS-FX240

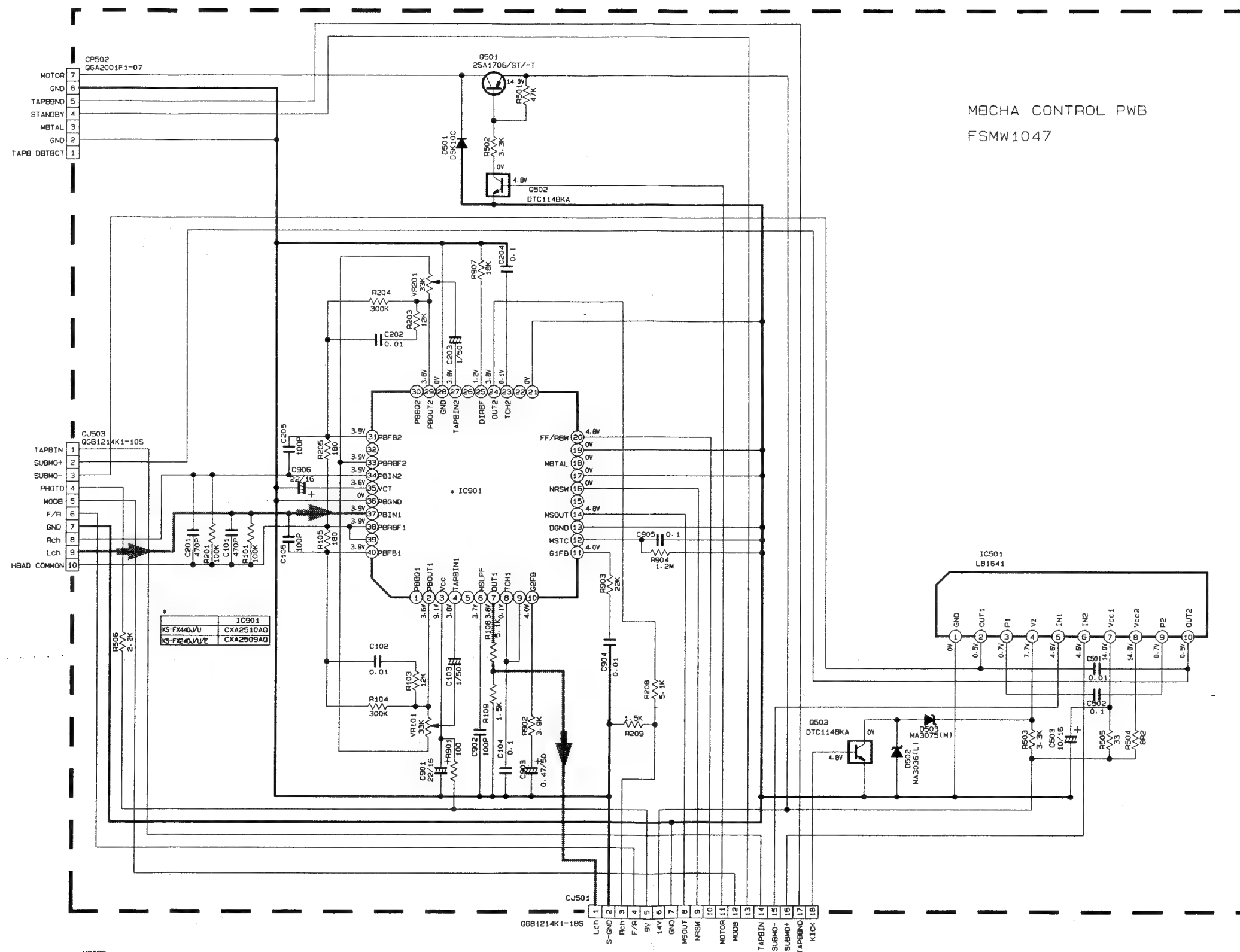
<<MEMO>>

Standard Schematic Diagrams

Reciever & Power Amp. Circuit : FSDH 3058-006AV (KS-FX440/KS-FX240)



■ Head Amp. Circuit : FSDH 3058-006MW (KS-FX440/KS-FX240)



NOTES

- VOLTAGES ARE DC+MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL.
CONDITION---TAPB MODE.
- UNLESS OTHERWISE SPECIFIED.
ALL RESISTORS ARE 1/4W ±5% OR 1/10W ±5% METAL GLAZE RESISTOR.
ALL CAPACITORS ARE 50V CERAMIC CAPACITOR.
ALL RESISTANCE VALUES ARE IN OHM(Ω).
ALL CAPACITANCE VALUES ARE IN nF(pF).
ALL CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(F)/RATED VOLTAGE(V)

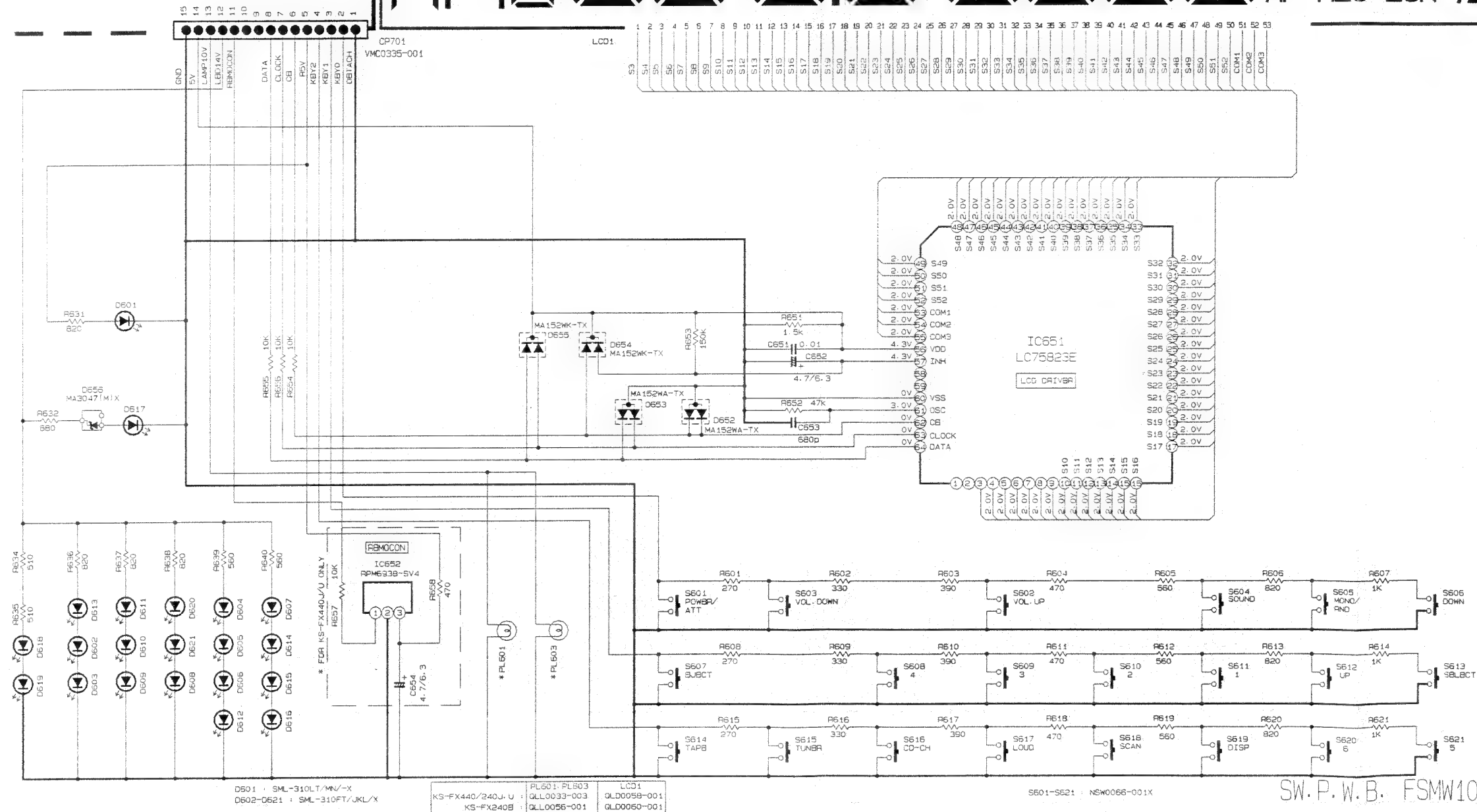
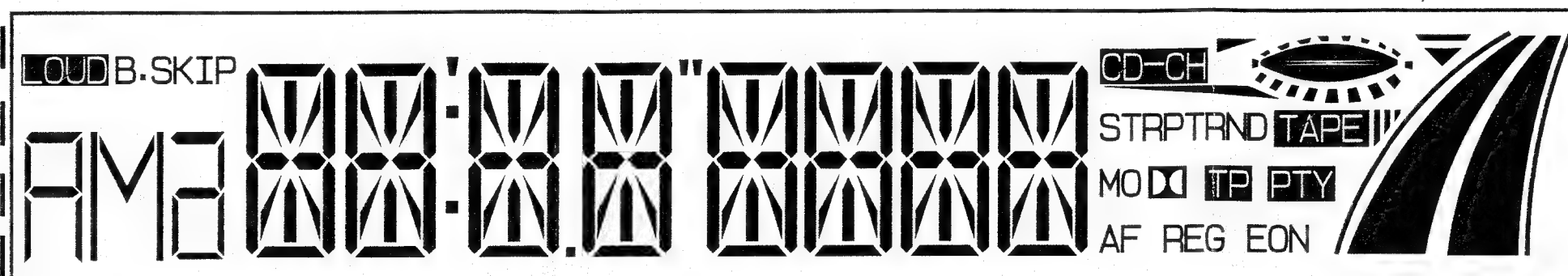
TF-----TF CAPACITOR

➡ Tape PB/Main

■ LCD Driver Circuit : FSDH 3058-006SW (KS-FX440/KS-FX240)

NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT-METER WITHOUT INPUT SIGNAL.
CONDITION --- FM MODE
2. UNLESS OTHERWISE SPECIFIED:
ALL RESISTORS ARE 1/4W 5% CARBON RESISTOR OR 1/4W 1/10W 5% METAL GLAZE RESISTOR.
ALL CAPACITORS ARE 50V CERAMIC CAPACITOR.
ALL RESISTANCE VALUES ARE IN OHM (Ω).
ALL CAPACITANCE VALUES ARE IN PICO (pF).
ALL CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF) / RATIO VOLTAGE (V).

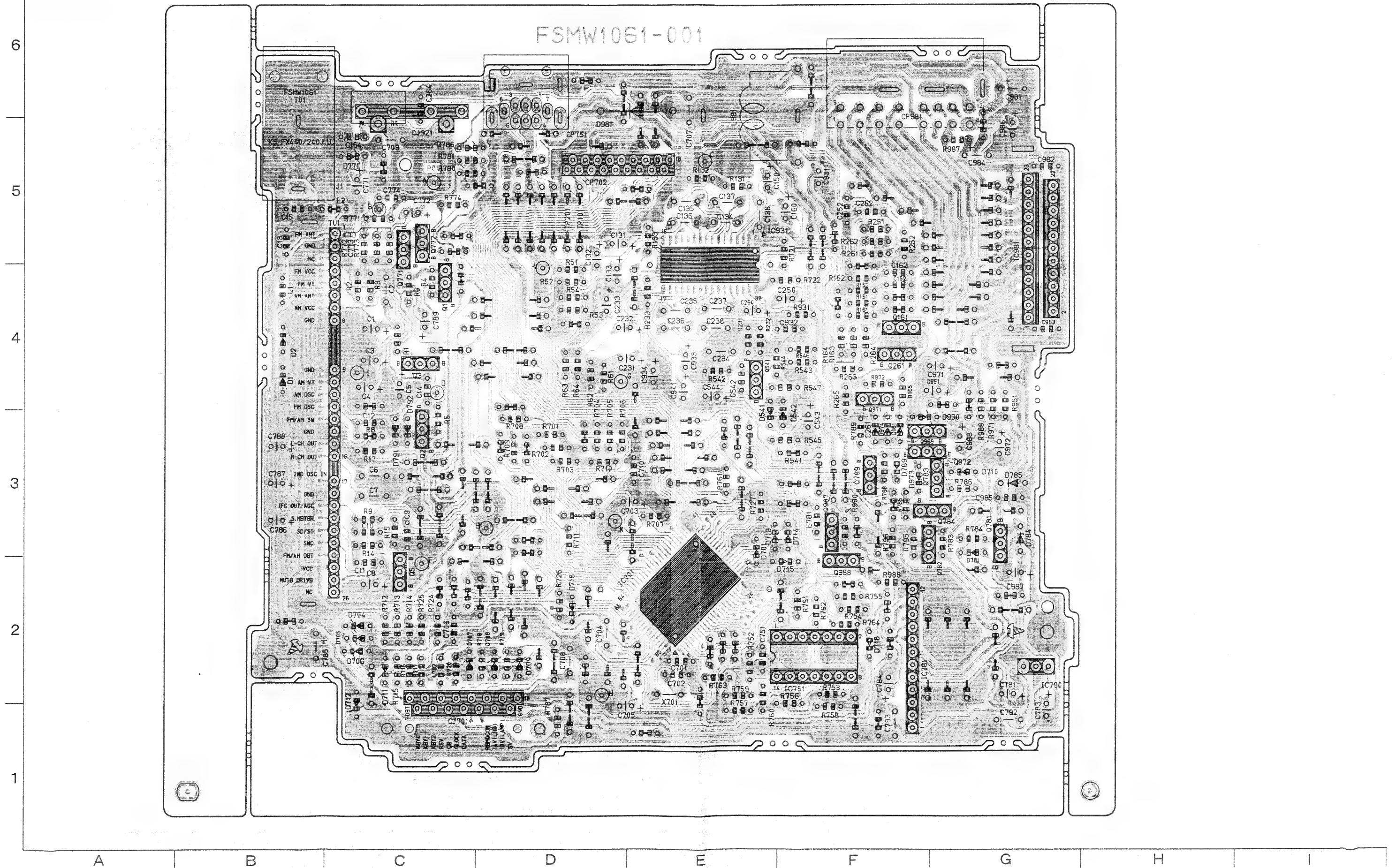


SW.P.W.B. FSMW1062

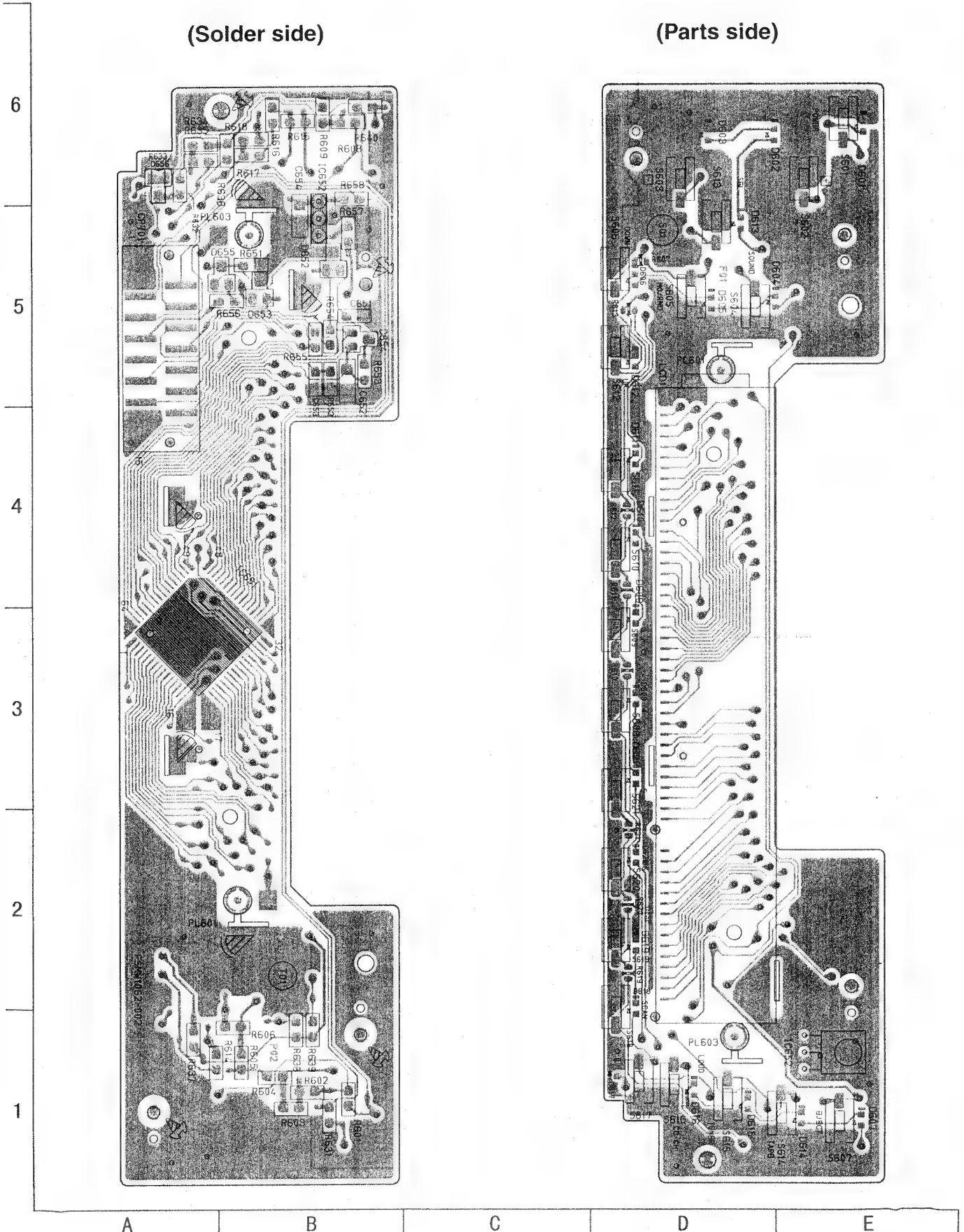
Printed Circuit Boards

■ Main Board : Block No. 01 (KS-FX440), 03 (KS-FX240)

(Solder side)

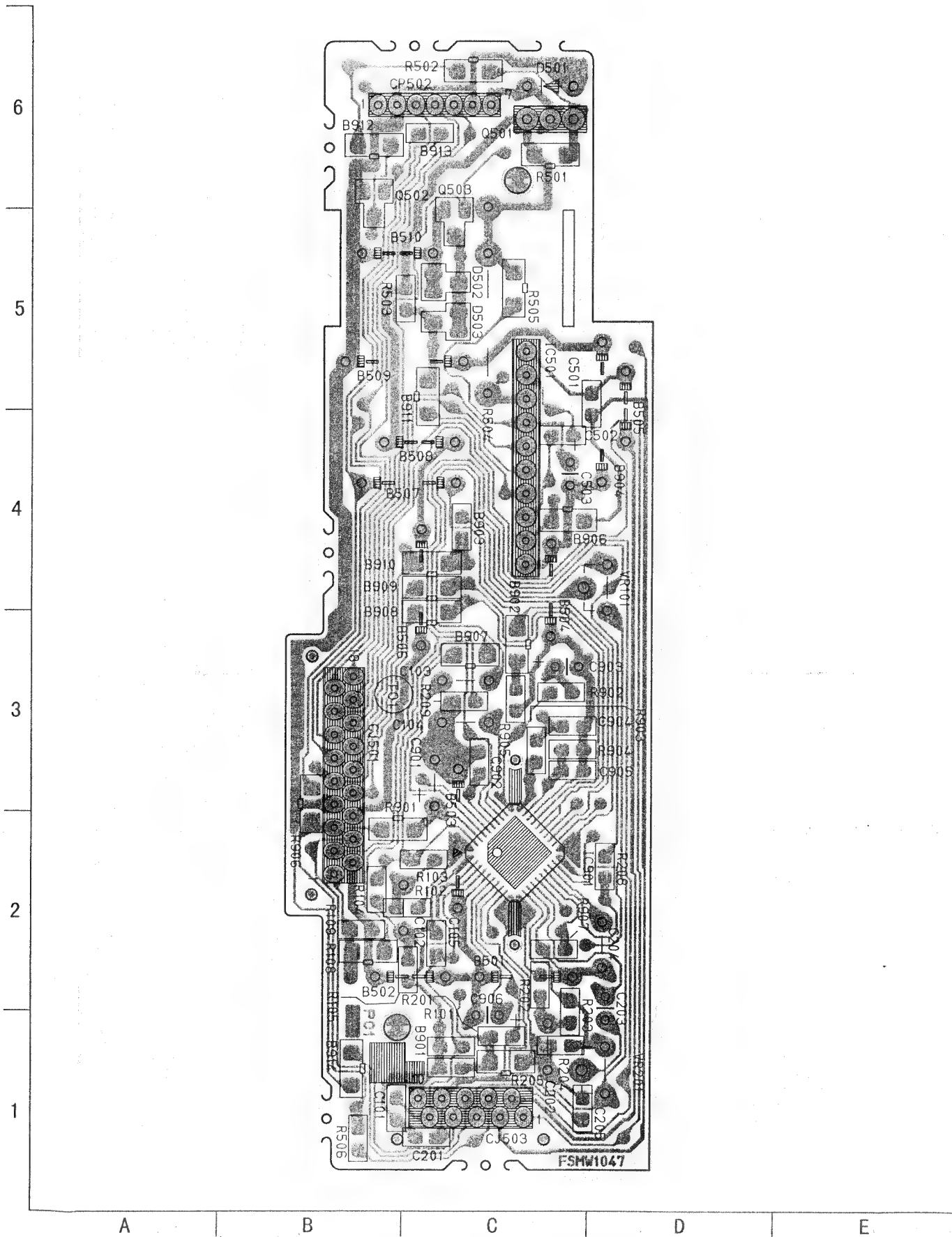


■ Switch Board : Block No. **02** (KS-FX440), **04** (KS-FX240)



KS-FX440
KS-FX240

■ Head Amplifier Board : Block No. 03



PARTS LIST

[KS-FX440 KS-FX240]

* All printed circuit boards and its assemblies are not available as service parts.

Area Suffix (KS-FX240)

J ---- Northern America

E---- Continental Europe

U---- Other Areas

Area Suffix (KS-FX440)

J ---- Northern America

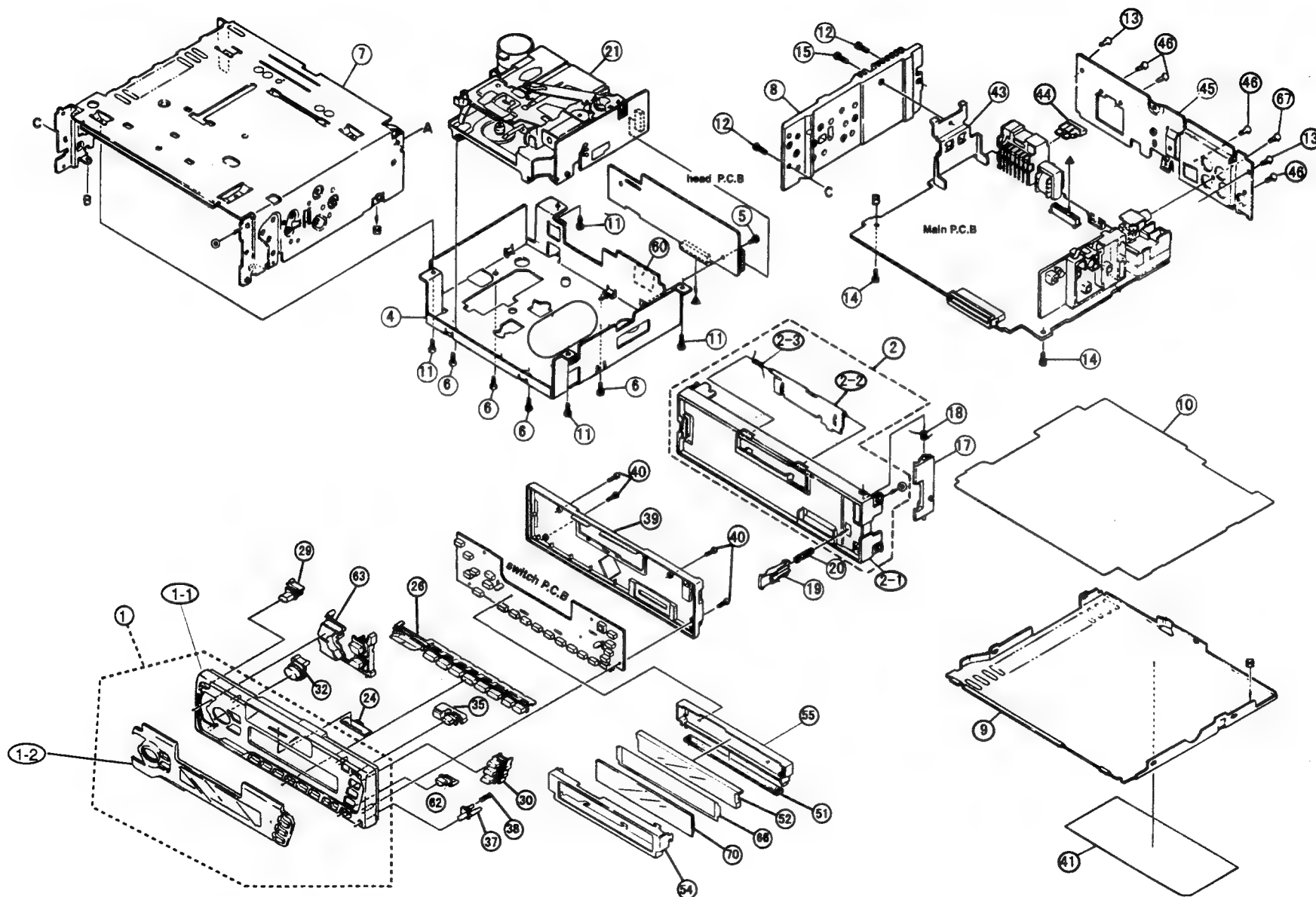
U---- Other Areas

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Exploded View of Cassette Mechanism Ass'y and Parts List	3-4
Electrical Parts List	3-7
Packing Materials and Accessories Parts List	3-20

Block No. **M** **1** **M** **M**

Exploded View of General Ass'y

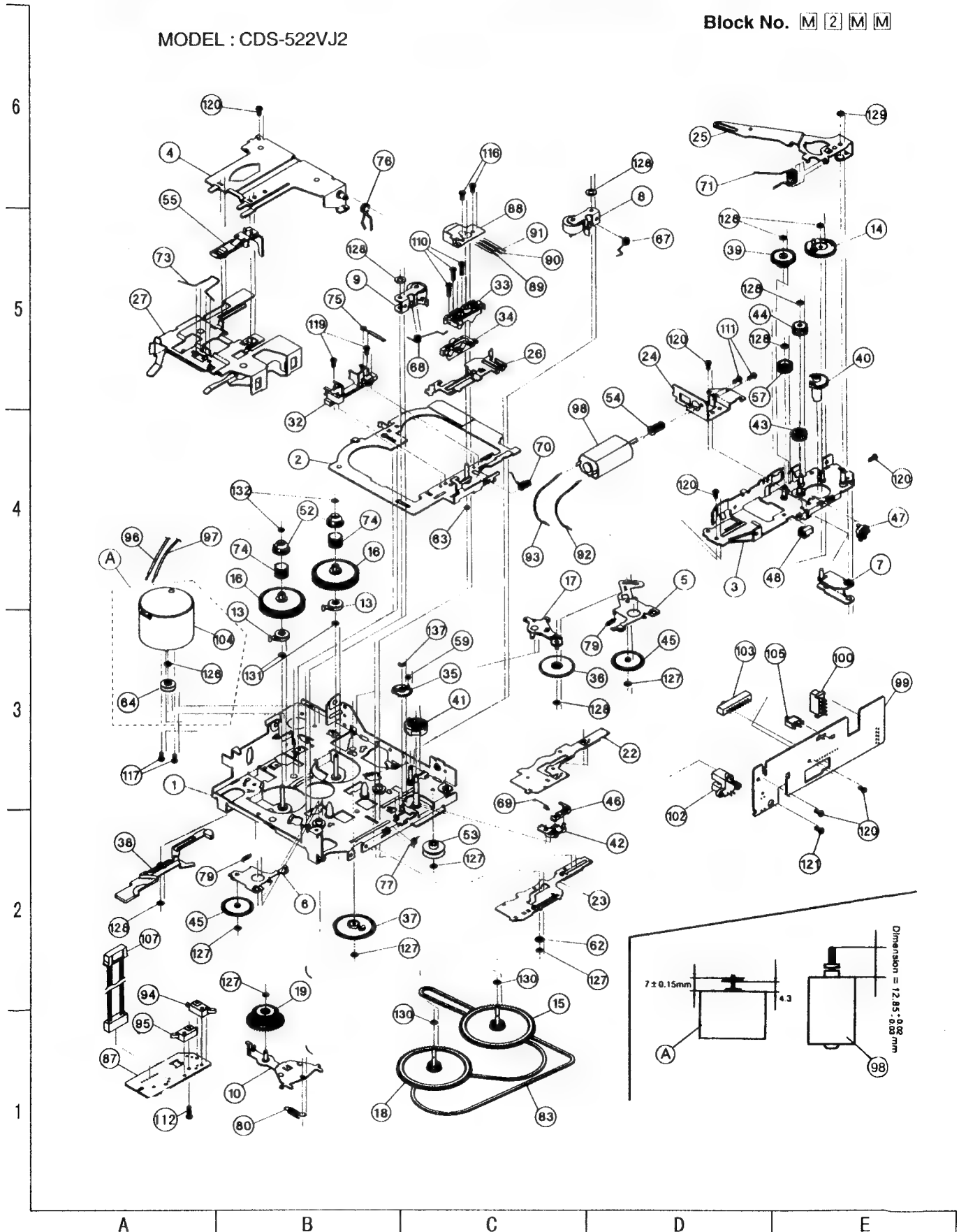


KS-FX440
KS-FX240

Exploded View of Cassette Mechanism Ass'y

MODEL : CDS-522VJ2

Block No. M 2 M M



■ Parts List

BLOCK NO. **1111**

REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
1	ZCKSF240J-NPA	NOSE PIECE	KS-FX240/J/E	1		
1-1	ZCKSF240J-NPA	NOSE PIECE	KS-FX440/J	1		
1-2	FSJC1040-001	FRONT PANEL		1		
	FSJD3017-008	FINDER ASSY	KS-FX440/J	1		
	FSJD3017-00A	FINDER ASSY	KS-FX240/J/E	1		
2	ZCKSF240J-FB	CHASSIS ASSY	KS-FX440/J	1		
2-1	ZCKSF240J-FB	CHASSIS ASSY	KS-FX240/J/E	1		
2-2	FSJC2012-001	FRONT CHASSIS		1		
	FSJC4003-028	CASSETTE LID	KS-FX440/J	1		
	FSJC4003-027	CASSETTE LID	KS-FX240/J/E	1		
2-3	VKW4947-002	DOOR SPRING		1		
4	FSKM2003-004	MECHA BRACKET		1		
5	QYSDST2604Z	SCREW	PCB+MECHA	1		
6	FSK24004-001	SCREW	MECHA+M.BKT	4		
7	FSJC1029-012	TOP CHASSIS		1		
8	FSMH3001-001	SIDE PANEL		1		
9	FSKM3011-001	BOTTOM COVER		1		
10	FSMA3004-003	INSULATOR		1		
11	QYSDST2604Z	SCREW	CHASSIS+MECHA B	4		
12	FSK24005-001	SCREW	CHASSIS+SIDE PA	2		
13	QYSDST2606Z	SCREW	CHASSIS+REAR BK	2		
14	QYSDST2606Z	SCREW	CHASSIS+MAIN PW	2		
15	FSK24005-001	SCREW	SIDE PANEL+IC B	1		
17	FSKS3010-001	LOCK LEVER		1		
18	FSKW4005-003	TORSION SPRING		1		
19	FSXP3026-002	RLS KNOB		1		
20	FSKW3002-004	COMP. SPRING		1		
21	-----	CDS-522VJ2 MECH	INDONESIAI MECHA	1		
24	FSJK3014-001	LIGHT LENS		1		
26	FSXP2035-001	PRESET BUTTON	1-6,DISP,SCAN	1		
29	FSXP3053-001	POWER BUTTON		1		
30	FSXP2034-001	D.FUNC BUTTON	TAPE,TUNER,CD-C	1		
32	FSXP3056-001	SEL BUTTON		1		
35	FSXP3054-001	EJECT BUTTON		1		
37	FSXP3055-001	DETACH BUTTON		1		
38	FSKW3002-012	COMP. SPRING	FOR DETACH BUTT	1		
39	FSJC1041-001	REAR COVER		1		
40	VKZ4777-001	MINI SCREW	F.PANEL+REAR CO	4		
41	FSYN3058-006	NAME PLATE	KS-FX440/J	1		
	FSYN3059-0005	NAME PLATE	KS-FX240/E	1		
	FSYN3059-006	NAME PLATE	KS-FX240/J	1		
43	FSKL4018-00A	IC BRACKET		1		
44	QMF2021-100-J1	FUSE		1		
45	FSKM3010-001	REAR BRACKET		1		
46	QYSDST2606Z	SCREW	REAR BKT+ANT JA	4		
51	QNZ0370-001	LCD CONNECTOR		1		
52	FSJK3023-001	LCD LENS		1		
54	FSYH3017-001	LCD CASE		1		
55	FSKS3011-001	LENS CASE		1		
60	FSYH4036-027	SPACER		1		
62	FSXP4005-001	BEE BUTTON		1		
63	FSXP2036-001	COMBO BUTTON		1		
66	FSYH4060-001	SHEET		1		
67	QYSDSF3006Z	SCREW	REAR BKT+PIN JA	1		
70	QLD0058-001	LCD	LCD1	1		

■ Parts List

BLOCK NO. **1211**

REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
A	100367057S-SA3	DC MOTOR ASS'Y	(NO.64,104,126)	1		
1	1-0522-6001-02S	MAIN CHASSIS		1		
2	1-0522-6002-02S	HEAD BASE		1		
3	1-0522-6003-11S	SUB CHASSIS		1		
4	X-0522-1004S	ARM HOLDER		1		
5	X-0522-1006-02S	TAKE-UP ARM		1		
6	X-0522-1007S	TAKE-UP ARM		1		
7	X-0522-1010S	SELECT ARM		1		
8	X-0522-1019S	PINCH ROLLER		1		
9	X-0522-1020S	PINCH ROLLER		1		
10	X-0522-1022S	F.F/REW.ARM		1		
13	X-0522-2008S	DETECT ARM		2		
14	X-0522-2010S	LOADING GEAR		1		
15	X-0522-2016-6S	FLYWHEEL ASY		1		
16	X-0522-2018S	REEL DISK		2		
17	X-0522-2020S	GEAR ARM		1		
18	X-0522-2021-6S	FLYWHEEL ASY(RN		1		
19	X-0052-2001S	F.R. GEAR ASS'Y		1		
22	1-0522-1008S	DIR.PLATE		1		
23	1-0522-1031S	FF/REW PLATE		1		
24	1-0522-1027S	MOTOR BKT		1		
25	1-0522-1013-30S	LOAD ARM		1		
26	1-0522-1014S	SHIFT CAM LINK		1		
27	1-0522-1017-50S	CASSETTE HOLDER		1		
32	1-0522-2001S	TAPE GUIDE		1		
33	1-0522-2002S	HEAD BRACKET		1		
34	1-0522-2003S	HEAD SHIFT CAM		1		
35	1-0522-2004-03S	SELECT GEAR		1		
36	1-0522-2005S	REDUCTION GEAR		1		
37	1-0522-2006S	DETECT GEAR		1		
38	1-0522-2007-50S	DETECTOR		1		
39	1-0522-2009S	WORM GEAR		1		
40	1-0522-2011S	MODE GEAR		1		
41	1-0522-2012S	MODE GEAR(2)		1		
42	1-0522-2013S	GEAR LATCH		1		
43	1-0522-2014S	IDLE GEAR(1)		1		
44	1-0522-2015S	IDLE GEAR(2)		1		
45	1-0522-2017S	TU GEAR		2		
46	1-0522-2019S	RACHET		1		
47	1-0522-2022S	SW ACTUATER		1		
48	1-0522-2024S	PWB STAY		1		
52	1-0052-2004S	REEL DRIVER		2		
53	1-0052-2006S	IDLE PULLEY		1		
54	1-0522-2023S	WORM		1		
55	1-0052-2032S	CATCH(K)		1		
57	1-0052-2041S	COUNTER GEAR		1		
59	1-0522-3005S	SELECT GEAR COL		1		
62	1-0052-3028S	H.B. ROLLER(L)		1		
63	1-0052-3029S	H.B. ROLLER(S)		1		
64	-----	MOTOR PULLEY		1		
67	1-0522-4001S	PINCH ARM(F)SPG		1		
68	1-0522-4002S	PINCH ARM(R)SPG		1		
69	1-0522-4003S	GEAR LATCH SPG		1		
70	1-0522-4004S	HEAD SPRING		1		

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BLOCK NO. **1244**

REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
71	1-0522-4006S	LOAD ARM SPG		1		
73	1-0522-4008S	CATCH SPRING		1		
74	1-0522-4010S	REEL DRIVER SPG		2		
75	1-0522-4011S	DASH SPRING		1		
76	1-0522-4014S	HOLDER ARM SPG		1		
77	1-0522-4016S	HOLD SPRING		1		
79	1-0522-4017S	TU ARM SPRING		2		
80	1-0522-4015S	FR ARM SPRING		1		
83	1-0052-5022S	BELT		1		
87	1-0522-7042S	REEL PWB		1		
88	1-0522-7003S	2CH HEAD	P-7742-HG	1		
89	1-0522-7004S	HEAD WIRE(A)		1		
90	1-0522-7005S	HEAD WIRE(B)		1		
91	1-0522-7006S	HEAD WIRE(C)		1		
92	1-0522-7007-04S	SUB MOTOR WIRE	RED	1		
93	1-0522-7008-04S	SUB MOTOR WIRE	BLACK	1		
94	1-0522-7038S	LEAF SWITCH	10920	1		
95	1-0522-7039S	LEAF SWITCH	11610	1		
96	1-0522-7013S	MOTOR WIRE	RED	1		
97	1-0522-7014S	MOTOR WIRE	BLACK	1		
98	1-0522-7040S	SUB MOTOR	FF-050SK-10200	1		
99	1-0522-7022-01S	HEAD PWB(JV)		1		
100	1-0522-7024S	CONNECTOR 10P	TKC-F10X-K1	1		
102	X-0052-7040S	PHOTO COUPLER		1		
103	1-0036-7007-1S	SLIDE SWITCH	SLD-32-710S	1		
104	-----	MOTOR ASS'Y	EG-520ED-38	1		
105	1-0056-7011S	SWITCH	SW-112-5	1		
107	1-0052-7013S	JOINT WIRE (7P)		1		
110	1-0522-5003S	AZIMUTH SCREW		3		
111	1-0052-5023S	MOTOR SCREW	M2X2.5	2		
112	1-0101-5006S	SCREW PLAIN	M1.7X7	2		
116	1-0522-5005S	SPECIAL SCREW(2		2		
117	2-1032-0022-C2S	MACHINE SCREW	M2X2.2	2		
119	1-0522-5006S	SPECIAL SCREW(3		2		
120	2-1332-0030-C1S	SCREW	M2X3	6		
121	2-1382-0050-C2S	PLAIN	M2X5	1		
126	-----	MYLAR WASHER		1		
127	2-1812-0030-D2S	POLY WASHER(S)	1.2X3X0.25	6		
128	2-1816-0032-D2S	POLY WASHER(S)	1.6X3.2X0.25	8		
129	2-1817-5040-D8S	LMW-S	1.75X4X0.25	1		
130	811816-0032-E8S	WASHER	1.6X3.2X0.35	2		
131	2-1821-0040-D1S	POLY WASHER	2.1X4X0.25	2		
132	1-0053-5005S	LMW-S	1.5X3.2X0.25	2		
137	2-1711-5040-16S	E RING	1.5	1		

■ Electrical Parts List (Main P. C. B.)

BLOCK NO. 01

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 1	QER41CM-106	E CAPACITOR	10MF 20% 16V	
C 2	QDX11EK-223Z	C CAPACITOR		
C 3	QERF1HM-104Z	E CAPACITOR	.10MF 20% 50V	
C 4	QERF1HM-104Z	E CAPACITOR	.10MF 20% 50V	
C 5	QER41AM-227	E CAPACITOR	220MF 20% 10V	
C 6	QFV61HJ-273Z	TF CAPACITOR	.027MF 5% 50V	
C 7	QFV61HJ-273Z	TF CAPACITOR	.027MF 5% 50V	
C 8	QERF1HM-104Z	E CAPACITOR	.10MF 20% 50V	
C 10	QCB81HK-121Y	C CAPACITOR	120PF 10% 50V	
C 11	QDYB1CM-103Y	C CAPACITOR		
C 131	QER41HM-105	E CAPACITOR	FM	
C 132	QER41HM-105	E CAPACITOR	TAPE	
C 133	QER41HM-105	E CAPACITOR	CD	
C 134	QFLA1HJ-822Z	M CAPACITOR	8200PF 5% 50V	
C 135	QFV61HJ-154Z	TF CAPACITOR	.15MF 5% 50V	
C 136	QFV41HJ-224	TF CAPACITOR	.22MF 5% 50V	
C 137	QFV41HJ-333	TF CAPACITOR	.033MF 5% 50V	
C 138	QFLK1HJ-562Z	M CAPACITOR	5600PF 5% 50V	
C 150	QER41HM-105	E CAPACITOR	FRONT	
C 152	QCB81HK-471Y	C CAPACITOR	FRONT	
C 160	QER41HM-105	E CAPACITOR	REAR	
C 162	QCB81HK-471Y	C CAPACITOR	REAR	
C 231	QER41HM-105	E CAPACITOR	FM	
C 232	QER41HM-105	E CAPACITOR	TAPE	
C 233	QER41HM-105	E CAPACITOR	CD	
C 234	QFLA1HJ-822Z	M CAPACITOR	8200PF 5% 50V	
C 235	QFV61HJ-154Z	TF CAPACITOR	.15MF 5% 50V	
C 236	QFV41HJ-224	TF CAPACITOR	.22MF 5% 50V	
C 237	QFV41HJ-333	TF CAPACITOR	.033MF 5% 50V	
C 238	QFLK1HJ-562Z	M CAPACITOR	5600PF 5% 50V	
C 250	QER41HM-105	E CAPACITOR	FRONT	
C 252	QCB81HK-471Y	C CAPACITOR	FRONT	
C 260	QER41HM-105	E CAPACITOR	REAR	
C 262	QCB81HK-471Y	C CAPACITOR	REAR	
C 541	QER41HM-105	E CAPACITOR	1.0MF 20% 50V	
C 542	QCF11H2-473	C CAPACITOR	.047MF +80%-20%	
C 543	QERF1HM-474Z	E CAPACITOR	.47MF 20% 50V	
C 544	QER41CM-226	E CAPACITOR	22MF 20% 16V	
C 701	QDUB1HJ-270Y	C CAPACITOR		
C 702	QDCB1HJ-220Y	C CAPACITOR		
C 703	QER40JM-107	E CAPACITOR	100MF 20% 6.3V	
C 705	QER41CM-106	E CAPACITOR	10MF 20% 16V	
C 706	QDYB1CM-103Y	C CAPACITOR		
C 707	QFV41HJ-103	TF CAPACITOR	.010MF 5% 50V	
C 708	QFV61HJ-153Z	TF CAPACITOR	.015MF 5% 50V	
C 709	QFV41HJ-473	TF CAPACITOR	.047MF 5% 50V	
C 710	QCB81HK-271Y	C CAPACITOR	270PF 10% 50V	
C 751	QDYB1CM-103Y	C CAPACITOR		
C 771	QER41AM-227	E CAPACITOR	220MF 20% 10V	
C 772	QER41HM-225	E CAPACITOR	2.2MF 20% 50V	
C 773	QDGB1HK-102Y	C CAPACITOR		
C 781	QEDJ1CM-106Z	E CAPACITOR	10MF 20% 16V	
C 783	QE20423-228	E CAPACITOR	2200MF	
C 784	QER41AM-227	E CAPACITOR	220MF 20% 10V	
C 785	QETB1CM-108	E CAPACITOR	1000MF 20% 16V	

BLOCK NO. 01

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 792	QFV11HJ-334A2	TF CAPACITOR	.33MF 5% 50V	
C 793	QFV41HJ-104	TF CAPACITOR	.10MF 5% 50V	
C 931	QER41AM-107	E CAPACITOR	100MF 20% 10V	
C 932	QDYB1CM-103Y	C CAPACITOR		
C 933	QER41AM-107	E CAPACITOR	100MF 20% 10V	
C 934	QER41CM-476	E CAPACITOR	47MF 20% 16V	
C 951	QER41EM-475	E CAPACITOR	4.7MF 20% 25V	
C 971	QER41EM-475	E CAPACITOR	4.7MF 20% 25V	
C 972	QER41AM-227	E CAPACITOR	220MF 20% 10V	
C 981	QE20337-228	E CAPACITOR	2200MF	
C 982	QDYB1CM-103Y	C CAPACITOR		
C 983	QDYB1CM-103Y	C CAPACITOR		
C 984	QEK41CM-106	E CAPACITOR	10MF 20% 16V	
C 985	QDYB1CM-103Y	C CAPACITOR		
C 986	QER41CM-106	E CAPACITOR	10MF 20% 16V	
C 987	QER41CM-106	E CAPACITOR	10MF 20% 16V	
C 988	QER41CM-476	E CAPACITOR	47MF 20% 16V	
CJ701	VMC0334-001	CONNECTOR	TO FRONT PANEL	
CJ921	QNN0170-001	PIN JACK (REEL)		
CP702	QGB1214J1-18S	CONNECTOR	TO MECHA	
CP751	QNZ0095-001	CONNECTOR	CH CONNECTOR	
CP981	QNZ0002-001	16P CONNECTOR		
D 1	1SS119-041	SI DIODE		
D 2	1SS119-041	SI DIODE		
D 161	1SS119-041	SI DIODE	REAR	
D 261	1SS119-041	SI DIODE	REAR	
D 541	RB721Q-T2	S.B.DIODE		
D 542	RB721Q-T2	S.B.DIODE		
D 701	1SS119-041	SI DIODE	DOLBY	
D 704	MT2J5.6B-T2	ZENER DIODE		
D 705	MT2J5.6B-T2	ZENER DIODE		
D 706	MT2J5.6B-T2	ZENER DIODE		
D 707	MT2J5.6B-T2	ZENER DIODE		
D 708	MT2J5.6B-T2	ZENER DIODE		
D 709	MT2J5.6B-T2	ZENER DIODE		
D 710	1SS119-041	SI DIODE		
D 711	MT2J5.6B-T2	ZENER DIODE		
D 712	MT2J5.6B-T2	ZENER DIODE		
D 716	1SS119-041	SI DIODE		
D 718	RB721Q-T2	S.B.DIODE		
D 771	MT2J9.1C-T2	ZENER DIODE		
D 781	RB721Q-T2	S.B.DIODE		
D 784	DSK10C-T1	DIODE		
D 785	DSK10C-T1	DIODE		
D 791	1SS119-041	SI DIODE		
D 792	1SS119-041	SI DIODE		
D 974	1SS119-041	SI DIODE		
D 981	1N5401-TM	DIODE		
D 990	MT211B-T2	SI DIODE		
IC701	LC72362N-9486	IC		
IC751	HD74HC126P	IC	CD-CH	
IC781	BA3918-V1	IC	REGULATOR	
IC790	KIA7810PI	10V REGULATOR		
IC931	TEA6320T-X	IC		
IC981	HA13158A	IC		

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BLOCK NO. 01

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
J 1	QNZ0009-001	CAR ANT JACK		
L 1	QQL231K-4R7Y	INDUCTOR		
L 781	QQL231K-470Y	INDUCTOR		
L 782	QQL231K-470Y	INDUCTOR		
L 981	QQR0704-001	CHOKE COIL		
Q 1	2SA1706/ST/-T	TRANSISTOR		
Q 2	DTC114ESA-T	D.TRANSISTOR		
Q 3	2SA1317/ST/-T	TRANSISTOR *		
Q 5	DTC114ESA-T	D.TRANSISTOR		
Q 161	2SC3330/ST/-T	TRANSISTOR	REAR	
Q 261	2SC3330/ST/-T	TRANSISTOR	REAR	
Q 541	2SC3330/ST/-T	TRANSISTOR		
Q 771	2SC3330/ST/-T	TRANSISTOR		
Q 772	2SC3330/ST/-T	TRANSISTOR		
Q 781	DTC114WSA-T	D.TR.I.M		
Q 782	2SA1706/ST/-T	TRANSISTOR		
Q 783	DTC114ESA-T	D.TRANSISTOR		
Q 784	2SA1317/ST/-T	TRANSISTOR *		
Q 789	DTA114ESA-T	D.TRANSISTOR		
Q 971	DTC114ESA-T	D.TRANSISTOR		
Q 972	DTA114ESA-T	D.TRANSISTOR		
Q 987	DTA114ESA-T	D.TRANSISTOR		
Q 988	DTC114ESA-T	D.TRANSISTOR		
Q 989	DTA114ESA-T	D.TRANSISTOR		
R 1	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
R 2	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 3	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 4	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
R 5	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 6	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
R 8	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
R 9	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
R 14	QRE141J-155Y	C RESISTOR	1.5M 5% 1/4W	
R 15	QRE141J-335Y	C RESISTOR	3.3M 5% 1/4W	
R 17	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
R 51	QRE141J-392Y	C RESISTOR	3.9K 5% 1/4W	
R 52	QRE141J-432Y	C RESISTOR	4.3K 5% 1/4W	
R 53	QRE141J-203Y	C RESISTOR	20K 5% 1/4W	
R 54	QRE141J-752Y	C RESISTOR	7.5K 5% 1/4W	
R 61	QRE141J-392Y	C RESISTOR	3.9K 5% 1/4W	
R 62	QRE141J-432Y	C RESISTOR	4.3K 5% 1/4W	
R 63	QRE141J-203Y	C RESISTOR	20K 5% 1/4W	
R 64	QRE141J-752Y	C RESISTOR	7.5K 5% 1/4W	
R 131	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
R 132	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
R 133	QRE141J-154Y	C RESISTOR	150K 5% 1/4W	
R 151	QRE141J-273Y	C RESISTOR	FRONT	
R 152	QRE141J-823Y	C RESISTOR	FRONT	
R 161	QRE141J-273Y	C RESISTOR	REAR	
R 162	QRE141J-823Y	C RESISTOR	REAR	
R 163	QRE141J-821Y	C RESISTOR	REAR	
R 164	QRE141J-101Y	C RESISTOR	REAR	
R 165	QRE141J-222Y	C RESISTOR	REAR	
R 231	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
R 232	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	

BLOCK NO. 01

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 233	QRE141J-154Y	C RESISTOR	150K 5% 1/4W	
R 251	QRE141J-273Y	C RESISTOR	FRONT	
R 252	QRE141J-823Y	C RESISTOR	FRONT	
R 261	QRE141J-273Y	C RESISTOR	REAR	
R 262	QRE141J-823Y	C RESISTOR	REAR	
R 263	QRE141J-821Y	C RESISTOR	REAR	
R 264	QRE141J-101Y	C RESISTOR	REAR	
R 265	QRE141J-222Y	C RESISTOR	REAR	
R 542	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
R 543	QRE141J-123Y	C RESISTOR	12K 5% 1/4W	
R 544	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 545	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
R 546	QRE141J-184Y	C RESISTOR	180K 5% 1/4W	
R 547	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
R 701	QRE141J-473Y	C RESISTOR	DOLBY	
R 702	QRE141J-473Y	C RESISTOR	MSIN	
R 703	QRE141J-473Y	C RESISTOR	F/R	
R 704	QRE141J-473Y	C RESISTOR	MODE	
R 705	QRE141J-473Y	C RESISTOR	TAPEEND	
R 706	QRE141J-473Y	C RESISTOR	STANDBY	
R 707	QRE141J-473Y	C RESISTOR	TAPEIN	
R 708	QRE141J-473Y	C RESISTOR	SD/ST	
R 709	QRE141J-472Y	C RESISTOR	MUTE	
R 710	QRE141J-472Y	C RESISTOR	FM/AM	
R 711	QRE141J-102Y	C RESISTOR	REMO	
R 712	QRE141J-332Y	C RESISTOR	KEY2	
R 713	QRE141J-332Y	C RESISTOR	KEY1	
R 714	QRE141J-332Y	C RESISTOR	KEY0	
R 715	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
R 716	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
R 717	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
R 718	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
R 719	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
R 720	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
R 721	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
R 722	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
R 724	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
R 725	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
R 726	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
R 727	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
R 751	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 752	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
R 753	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
R 754	QRE141J-334Y	C RESISTOR	330K 5% 1/4W	
R 755	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
R 756	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
R 757	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
R 758	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
R 759	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
R 760	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
R 761	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 762	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 763	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 764	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
R 771	QRE141J-471Y	C RESISTOR	470 5% 1/4W	

BLOCK NO. 0911111

A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R 772	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 773	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 774	QRE141J-152Y	C RESISTOR	1.5K 5% 1/4W	
	R 780	RB721Q-T2	S.B.DIODE		
	R 783	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 784	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 785	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 786	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 787	QRE141J-6R8Y	C RESISTOR	6.8 5% 1/4W	
	R 788	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 789	QRE141J-474Y	C RESISTOR	470K 5% 1/4W	
	R 795	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 796	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 931	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
	R 951	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R 971	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 972	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R 987	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R 988	QRE141J-182Y	C RESISTOR	1.8K 5% 1/4W	
	R 989	QRE141J-123Y	C RESISTOR	12K 5% 1/4W	
	R 990	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	TU 1	QAU0102-001	TUNER PACK		
	X 701	QAX0406-0012	CRYSTAL		

KS-FX440
KS-FX240

■ Electrical Parts List (Switch)

BLOCK NO. 02

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 651	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
C 652	NBE20JM-475X	TS E CAPACITOR		
C 653	NCB21HK-681X	C CAPACITOR	680PF 10% 50V	
C 654	NBE20JM-475X	TS E CAPACITOR		
CJ503	QGB1214K1-10S	CONNECTOR		
CP701	VMC0335-001	CONNECTOR		
D 601	SML-310LT/MN/-X	LED		
D 602	SML-310FT/JKL/X	LED		
D 603	SML-310FT/JKL/X	LED		
D 604	SML-310FT/JKL/X	LED		
D 605	SML-310FT/JKL/X	LED		
D 606	SML-310FT/JKL/X	LED		
D 607	SML-310FT/JKL/X	LED		
D 608	SML-310FT/JKL/X	LED		
D 609	SML-310FT/JKL/X	LED		
D 610	SML-310FT/JKL/X	LED		
D 611	SML-310FT/JKL/X	LED		
D 612	SML-310FT/JKL/X	LED		
D 613	SML-310FT/JKL/X	LED		
D 614	SML-310FT/JKL/X	LED		
D 615	SML-310FT/JKL/X	LED		
D 616	SML-310FT/JKL/X	LED		
D 617	SML-310FT/JKL/X	LED		
D 618	SML-310FT/JKL/X	LED		
D 619	SML-310FT/JKL/X	LED		
D 620	SML-310FT/JKL/X	LED		
D 621	SML-310FT/JKL/X	LED		
D 652	MA152WA-X	DIODE		
D 653	MA152WA-X	DIODE		
D 654	MA152WK-X	SI DIODE		
D 655	MA152WK-X	SI DIODE		
D 656	MA3047/M/-X	ZENER DIODE		
IC651	LC75823E	IC		
IC652	RPM6938-SV4	IC		
PL601	QLL0033-003	LAMP	BLUE CAP	
PL603	QLL0033-003	LAMP	BLUE CAP	
R 601	NRSA02J-271X	MG RESISTOR	270 5% 1/10W	
R 602	NRSA02J-331X	MG RESISTOR	330 5% 1/10W	
R 603	NRSA02J-391X	MG RESISTOR	390 5% 1/10W	
R 604	NRSA02J-471X	MG RESISTOR	470 5% 1/10W	
R 605	NRSA02J-561X	MG RESISTOR	560 5% 1/10W	
R 606	NRSA02J-821X	MG RESISTOR	820 5% 1/10W	
R 607	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
R 608	NRSA02J-271X	MG RESISTOR	270 5% 1/10W	
R 609	NRSA02J-331X	MG RESISTOR	330 5% 1/10W	
R 610	NRSA02J-391X	MG RESISTOR	390 5% 1/10W	
R 611	NRSA02J-471X	MG RESISTOR	470 5% 1/10W	
R 612	NRSA02J-561X	MG RESISTOR	560 5% 1/10W	
R 613	NRSA02J-821X	MG RESISTOR	820 5% 1/10W	
R 614	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
R 615	NRSA02J-271X	MG RESISTOR	270 5% 1/10W	
R 616	NRSA02J-331X	MG RESISTOR	330 5% 1/10W	
R 617	NRSA02J-391X	MG RESISTOR	390 5% 1/10W	
R 618	NRSA02J-471X	MG RESISTOR	470 5% 1/10W	
R 619	NRSA02J-561X	MG RESISTOR	560 5% 1/10W	

BLOCK NO. 02

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 620	NRSA02J-821X	MG RESISTOR	820 5% 1/10W	
R 621	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
R 631	NRSA02J-821X	MG RESISTOR	820 5% 1/10W	
R 632	NRSA02J-681X	MG RESISTOR	680 5% 1/10W	
R 634	NRSA02J-511X	MG RESISTOR	510 5% 1/10W	
R 635	NRSA02J-511X	MG RESISTOR	510 5% 1/10W	
R 636	NRSA02J-821X	MG RESISTOR	820 5% 1/10W	
R 637	NRSA02J-821X	MG RESISTOR	820 5% 1/10W	
R 638	NRSA02J-821X	MG RESISTOR	820 5% 1/10W	
R 639	NRSA02J-561X	MG RESISTOR	560 5% 1/10W	
R 640	NRSA02J-561X	MG RESISTOR	560 5% 1/10W	
R 651	NRSA02J-152X	MG RESISTOR	1.5K 5% 1/10W	
R 652	NRSA02J-473X	MG RESISTOR	47K 5% 1/10W	
R 653	NRSA02J-154X	MG RESISTOR	150K 5% 1/10W	
R 654	NRSA02J-103X	MG RESISTOR	10K 5% 1/10W	
R 655	NRSA02J-103X	MG RESISTOR	10K 5% 1/10W	
R 656	NRSA02J-103X	MG RESISTOR	10K 5% 1/10W	
R 657	NRSA02J-103X	MG RESISTOR	10K 5% 1/10W	
R 658	NRSA02J-471X	MG RESISTOR	470 5% 1/10W	
R 901	NRS181J-101X	MG RESISTOR	100 5% 1/8W	
S 601	NSW0066-001X	TACT SWITCH		
S 602	NSW0066-001X	TACT SWITCH		
S 603	NSW0066-001X	TACT SWITCH		
S 604	NSW0066-001X	TACT SWITCH		
S 605	NSW0066-001X	TACT SWITCH		
S 606	NSW0066-001X	TACT SWITCH		
S 607	NSW0066-001X	TACT SWITCH		
S 608	NSW0066-001X	TACT SWITCH		
S 609	NSW0066-001X	TACT SWITCH		
S 610	NSW0066-001X	TACT SWITCH		
S 611	NSW0066-001X	TACT SWITCH		
S 612	NSW0066-001X	TACT SWITCH		
S 613	NSW0066-001X	TACT SWITCH		
S 614	NSW0066-001X	TACT SWITCH		
S 615	NSW0066-001X	TACT SWITCH		
S 616	NSW0066-001X	TACT SWITCH		
S 617	NSW0066-001X	TACT SWITCH		
S 618	NSW0066-001X	TACT SWITCH		
S 619	NSW0066-001X	TACT SWITCH		
S 620	NSW0066-001X	TACT SWITCH		
S 621	NSW0066-001X	TACT SWITCH		

■ Electrical Parts List (Main P. C. B.)

BLOCK NO. 03

A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C	1	QER41CM-106	E CAPACITOR	10MF 20% 16V	
C	2	QDX11EK-223Z	C CAPACITOR		
C	3	QERF1HM-104Z	E CAPACITOR	.10MF 20% 50V	
C	4	QERF1HM-104Z	E CAPACITOR	.10MF 20% 50V	
C	5	QERF1CM-107Z	E CAPACITOR	100MF 20% 16V	
C	6	QDX11EK-273Z	C CAPACITOR		
C	7	QDX11EK-273Z	C CAPACITOR		
C	8	QERF1HM-104Z	E CAPACITOR	.10MF 20% 50V	
C	10	QCB81HK-121Y	C CAPACITOR	120PF 10% 50V	
C	11	QDYB1CM-103Y	C CAPACITOR		
C	131	QER41HM-105	E CAPACITOR	FM	
C	132	QER41HM-105	E CAPACITOR	TAPE	
C	133	QER41HM-105	E CAPACITOR	CD	
C	134	QFLA1HJ-822Z	M CAPACITOR	8200PF 5% 50V	
C	135	QFV61HJ-154Z	TF CAPACITOR	.15MF 5% 50V	
C	136	QFV41HJ-224	TF CAPACITOR	.22MF 5% 50V	
C	137	QFV41HJ-333	TF CAPACITOR	.033MF 5% 50V	
C	138	QFLK1HJ-562Z	M CAPACITOR	5600PF 5% 50V	
C	150	QER41HM-105	E CAPACITOR	FRONT	
C	152	QCB81HK-471Y	C CAPACITOR	FRONT	
C	160	QER41HM-105	E CAPACITOR	REAR	
C	162	QCB81HK-471Y	C CAPACITOR	REAR	
C	231	QER41HM-105	E CAPACITOR	FM	
C	232	QER41HM-105	E CAPACITOR	TAPE	
C	233	QER41HM-105	E CAPACITOR	CD	
C	234	QFLA1HJ-822Z	M CAPACITOR	8200PF 5% 50V	
C	235	QFV61HJ-154Z	TF CAPACITOR	.15MF 5% 50V	
C	236	QFV41HJ-224	TF CAPACITOR	.22MF 5% 50V	
C	237	QFV41HJ-333	TF CAPACITOR	.033MF 5% 50V	
C	238	QFLK1HJ-562Z	M CAPACITOR	5600PF 5% 50V	
C	250	QER41HM-105	E CAPACITOR	FRONT	
C	252	QCB81HK-471Y	C CAPACITOR	FRONT	
C	260	QER41HM-105	E CAPACITOR	REAR	
C	262	QCB81HK-471Y	C CAPACITOR	REAR	
C	541	QER41HM-105	E CAPACITOR	1.0MF 20% 50V	
C	542	QCF11H2-473	C CAPACITOR	.047MF +80%-20%	
C	543	QERF1HM-474Z	E CAPACITOR	.47MF 20% 50V	
C	544	QER41CM-226	E CAPACITOR	22MF 20% 16V	
C	701	QDUB1HJ-270Y	C CAPACITOR		
C	702	QDCB1HJ-220Y	C CAPACITOR		
C	703	QER40JM-107	E CAPACITOR	100MF 20% 6.3V	
C	704	QFV41HJ-224	TF CAPACITOR	.22MF 5% 50V	
C	705	QER41CM-106	E CAPACITOR	10MF 20% 16V	
C	706	QDYB1CM-103Y	C CAPACITOR		
C	707	QFV41HJ-103	TF CAPACITOR	.010MF 5% 50V	
C	708	QFV61HJ-153Z	TF CAPACITOR	.015MF 5% 50V	
C	709	QFV41HJ-473	TF CAPACITOR	.047MF 5% 50V	
C	751	QDYB1CM-103Y	C CAPACITOR		
C	771	QER41AM-227	E CAPACITOR	220MF 20% 10V	
C	772	QER41HM-225	E CAPACITOR	2.2MF 20% 50V	
C	773	QDGB1HK-102Y	C CAPACITOR		
C	781	QEDJ1CM-106Z	E CAPACITOR	10MF 20% 16V	
C	783	QE20423-228	E CAPACITOR	2200MF	
C	784	QER41AM-227	E CAPACITOR	220MF 20% 10V	
C	785	QET41CM-477	E CAPACITOR	470MF 20% 16V	

BLOCK NO. 03

A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C	792	QFV11HJ-334A2	TF CAPACITOR	.33MF 5% 50V	
C	793	QFV41HJ-104	TF CAPACITOR	.10MF 5% 50V	
C	931	QER41AM-107	E CAPACITOR	100MF 20% 10V	
C	932	QDYB1CM-103Y	C CAPACITOR		
C	933	QER41AM-107	E CAPACITOR	100MF 20% 10V	
C	934	QER41CM-476	E CAPACITOR	47MF 20% 16V	
C	951	QER41EM-475	E CAPACITOR	4.7MF 20% 25V	
C	971	QER41EM-475	E CAPACITOR	4.7MF 20% 25V	
C	972	QER41AM-227	E CAPACITOR	220MF 20% 10V	
C	981	QE20337-228	E CAPACITOR	2200MF	
C	982	QDYB1CM-103Y	C CAPACITOR		
C	983	QDYB1CM-103Y	C CAPACITOR		
C	984	QEK41CM-106	E CAPACITOR	10MF 20% 16V	
C	985	QDYB1CM-103Y	C CAPACITOR		
C	986	QER41CM-106	E CAPACITOR	10MF 20% 16V	
C	987	QER41CM-106	E CAPACITOR	10MF 20% 16V	
C	988	QER41CM-476	E CAPACITOR	47MF 20% 16V	
C	J701	VMC0334-001	CONNECTOR	TO FRONT PANEL	
C	CJ921	QNN0170-001	PIN JACK (REEL)		
C	CP702	QGB1214J1-18S	CONNECTOR	TO MECHA	
C	CP751	QNZ0095-001	CONNECTOR	CH CONNECTOR	
C	CP981	QNZ0002-001	16P CONNECTOR		
D	1	1SS119-041	SI DIODE		
D	2	1SS119-041	SI DIODE		
D	161	1SS119-041	SI DIODE	REAR	
D	261	1SS119-041	SI DIODE	REAR	
D	541	RB721Q-T2	S.B.DIODE		
D	542	RB721Q-T2	S.B.DIODE		
D	704	MTZJ6.2C-T2	ZENER DIODE		
D	705	MTZJ6.2C-T2	ZENER DIODE		
D	706	MTZJ6.2C-T2	ZENER DIODE		
D	707	MTZJ6.2C-T2	ZENER DIODE		
D	708	MTZJ6.2C-T2	ZENER DIODE		
D	709	MTZJ6.2C-T2	ZENER DIODE		
D	710	1SS119-041	SI DIODE		
D	711	MTZJ6.2C-T2	ZENER DIODE		
D	712	MTZJ6.2C-T2	ZENER DIODE		
D	716	1SS119-041	SI DIODE		
D	718	RB721Q-T2	S.B.DIODE		
D	771	MTZJ9.1C-T2	ZENER DIODE		
D	781	RB721Q-T2	S.B.DIODE		
D	784	DSK10C-T1	DIODE		
D	785	DSK10C-T1	DIODE		
D	791	1SS119-041	SI DIODE		
D	792	1SS119-041	SI DIODE		
D	974	1SS119-041	SI DIODE		
D	981	1N5401-TM	DIODE		
D	990	MTZ11B-T2	SI DIODE		
C	IC701	LC72362N-9486	IC		
C	IC751	HD74HC126P	IC	CD-CH	
C	IC781	BA3918-V1	IC	REGULATOR	
C	IC790	K1A7810PI	10V REGULATOR		
C	IC931	TEA6320T-X	IC		
C	IC981	HA13158A	IC		
J	1	QNZ0009-001	CAR ANT JACK		

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BLOCK NO. 03

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
L 1	QQL231K-330Y	INDUCTOR		
L 781	QQL231K-470Y	INDUCTOR		
L 782	QQL231K-470Y	INDUCTOR		
L 981	QQR0704-001	CHOKE COIL		
Q 1	2SA1706/ST/-T	TRANSISTOR		
Q 2	DTC114ESA-T	D. TRANSISTOR		
Q 3	2SA1317/ST/-T	TRANSISTOR *		
Q 5	DTC114ESA-T	D. TRANSISTOR		
Q 161	2SC3330/ST/-T	TRANSISTOR	REAR	
Q 261	2SC3330/ST/-T	TRANSISTOR	REAR	
Q 541	2SC3330/ST/-T	TRANSISTOR		
Q 771	2SC3330/ST/-T	TRANSISTOR		
Q 772	2SC3330/ST/-T	TRANSISTOR		
Q 781	DTC114ESA-T	D. TRANSISTOR		
Q 782	2SA1706/ST/-T	TRANSISTOR		
Q 783	DTC114ESA-T	D. TRANSISTOR		
Q 784	2SA1317/ST/-T	TRANSISTOR *		
Q 789	DTA114ESA-T	D. TRANSISTOR		
Q 971	DTC114ESA-T	D. TRANSISTOR		
Q 972	DTA114ESA-T	D. TRANSISTOR		
Q 987	DTA114ESA-T	D. TRANSISTOR		
Q 988	DTC114ESA-T	D. TRANSISTOR		
Q 989	DTA114ESA-T	D. TRANSISTOR		
R 1	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
R 2	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 3	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 4	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
R 5	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 6	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
R 9	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
R 14	QRE141J-155Y	C RESISTOR	1.5M 5% 1/4W	
R 15	QRE141J-335Y	C RESISTOR	3.3M 5% 1/4W	
R 17	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
R 51	QRE141J-392Y	C RESISTOR	3.9K 5% 1/4W	
R 52	QRE141J-432Y	C RESISTOR	4.3K 5% 1/4W	
R 53	QRE141J-203Y	C RESISTOR	20K 5% 1/4W	
R 54	QRE141J-752Y	C RESISTOR	7.5K 5% 1/4W	
R 61	QRE141J-392Y	C RESISTOR	3.9K 5% 1/4W	
R 62	QRE141J-432Y	C RESISTOR	4.3K 5% 1/4W	
R 63	QRE141J-203Y	C RESISTOR	20K 5% 1/4W	
R 64	QRE141J-752Y	C RESISTOR	7.5K 5% 1/4W	
R 131	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
R 132	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
R 133	QRE141J-154Y	C RESISTOR	150K 5% 1/4W	
R 151	QRE141J-273Y	C RESISTOR	FRONT	
R 152	QRE141J-823Y	C RESISTOR	FRONT	
R 161	QRE141J-273Y	C RESISTOR	REAR	
R 162	QRE141J-823Y	C RESISTOR	REAR	
R 163	QRE141J-821Y	C RESISTOR	REAR	
R 164	QRE141J-101Y	C RESISTOR	REAR	
R 165	QRE141J-222Y	C RESISTOR	REAR	
R 231	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
R 232	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
R 233	QRE141J-154Y	C RESISTOR	150K 5% 1/4W	
R 251	QRE141J-273Y	C RESISTOR	FRONT	

BLOCK NO. 03

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 252	QRE141J-823Y	C RESISTOR	FRONT	
R 261	QRE141J-273Y	C RESISTOR	REAR	
R 262	QRE141J-823Y	C RESISTOR	REAR	
R 263	QRE141J-821Y	C RESISTOR	REAR	
R 264	QRE141J-101Y	C RESISTOR	REAR	
R 265	QRE141J-222Y	C RESISTOR	REAR	
R 542	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
R 543	QRE141J-123Y	C RESISTOR	12K 5% 1/4W	
R 544	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 545	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
R 546	QRE141J-184Y	C RESISTOR	180K 5% 1/4W	
R 547	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
R 702	QRE141J-473Y	C RESISTOR	MSIN	
R 703	QRE141J-473Y	C RESISTOR	F/R	
R 704	QRE141J-473Y	C RESISTOR	MODE	
R 705	QRE141J-473Y	C RESISTOR	TAPEEND	
R 706	QRE141J-473Y	C RESISTOR	STANDBY	
R 707	QRE141J-473Y	C RESISTOR	TAPEIN	
R 708	QRE141J-473Y	C RESISTOR	SD/ST	
R 709	QRE141J-472Y	C RESISTOR	MUTE	
R 710	QRE141J-472Y	C RESISTOR	FM/AM	
R 711	QRE141J-473Y	C RESISTOR	REMO	
R 712	QRE141J-332Y	C RESISTOR	KEY2	
R 713	QRE141J-332Y	C RESISTOR	KEY1	
R 714	QRE141J-332Y	C RESISTOR	KEY0	
R 715	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
R 716	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
R 717	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
R 718	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
R 719	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
R 720	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
R 721	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
R 722	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
R 724	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
R 725	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
R 726	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
R 727	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
R 751	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 752	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
R 753	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
R 754	QRE141J-334Y	C RESISTOR	330K 5% 1/4W	
R 755	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
R 756	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
R 757	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
R 758	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
R 759	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
R 760	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
R 761	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 762	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 763	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 764	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
R 771	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
R 772	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
R 773	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 774	QRE141J-152Y	C RESISTOR	1.5K 5% 1/4W	

BLOCK NO. 03

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 783	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
R 784	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 785	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
R 786	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 787	QRE141J-68BY	C RESISTOR	6.8 5% 1/4W	
R 788	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
R 789	QRE141J-474Y	C RESISTOR	470K 5% 1/4W	
R 795	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
R 796	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
R 931	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
R 951	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
R 971	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
R 972	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
R 987	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
R 988	QRE141J-242Y	C RESISTOR	2.4K 5% 1/4W	
R 989	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
R 990	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
TU 1	QAU0102-001	TUNER PACK		
X 701	QAX0406-001Z	CRYSTAL		

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■ Electrical Parts List (Switch)

BLOCK NO. 04

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 651	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
C 652	NBE20JM-475X	TS E CAPACITOR		
C 653	NCB21HK-681X	C CAPACITOR	680PF 10% 50V	
CJ501	QGB1214K1-18S	CONNECTOR		
CP502	QGA2001F1-07	7P PLUG ASSY		
CP701	VMC0335-001	CONNECTOR		
D 501	DSK10C-T1	DIODE		
D 502	MA3036/L/-X	ZENER DIODE		
D 503	MA3075/M/-X	ZENER DIODE		
D 601	SML-310LT/MN/-X	LED		
D 602	SML-310FT/JKL/X	LED		
D 603	SML-310FT/JKL/X	LED		
D 604	SML-310FT/JKL/X	LED		
D 605	SML-310FT/JKL/X	LED		
D 606	SML-310FT/JKL/X	LED		
D 607	SML-310FT/JKL/X	LED		
D 608	SML-310FT/JKL/X	LED		
D 609	SML-310FT/JKL/X	LED		
D 610	SML-310FT/JKL/X	LED		
D 611	SML-310FT/JKL/X	LED		
D 612	SML-310FT/JKL/X	LED		
D 613	SML-310FT/JKL/X	LED		
D 614	SML-310FT/JKL/X	LED		
D 615	SML-310FT/JKL/X	LED		
D 616	SML-310FT/JKL/X	LED		
D 617	SML-310FT/JKL/X	LED		
D 618	SML-310FT/JKL/X	LED		
D 619	SML-310FT/JKL/X	LED		
D 620	SML-310FT/JKL/X	LED		
D 621	SML-310FT/JKL/X	LED		
D 652	MA152WA-X	DIODE		
D 653	MA152WA-X	DIODE		
D 654	MA152WK-X	SI DIODE		
D 655	MA152WK-X	SI DIODE		
IC501	LB1641	IC		
IC651	LC75823E	IC		
PL601	QLL0033-003	LAMP	GREEN	
PL603	QLL0033-003	LAMP	GREEN	
Q 501	2SA1706/ST/-T	TRANSISTOR		
Q 502	DTC114EKA-X	TRANSISTOR		
Q 503	DTC114EKA-X	TRANSISTOR		
R 601	NRSA02J-271X	MG RESISTOR	270 5% 1/10W	
R 602	NRSA02J-331X	MG RESISTOR	330 5% 1/10W	
R 603	NRSA02J-391X	MG RESISTOR	390 5% 1/10W	
R 604	NRSA02J-471X	MG RESISTOR	470 5% 1/10W	
R 605	NRSA02J-561X	MG RESISTOR	560 5% 1/10W	
R 606	NRSA02J-821X	MG RESISTOR	820 5% 1/10W	
R 607	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
R 608	NRSA02J-271X	MG RESISTOR	270 5% 1/10W	
R 609	NRSA02J-331X	MG RESISTOR	330 5% 1/10W	
R 610	NRSA02J-391X	MG RESISTOR	390 5% 1/10W	
R 611	NRSA02J-471X	MG RESISTOR	470 5% 1/10W	
R 612	NRSA02J-561X	MG RESISTOR	560 5% 1/10W	
R 613	NRSA02J-821X	MG RESISTOR	820 5% 1/10W	
R 614	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	

BLOCK NO. 04

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 615	NRSA02J-271X	MG RESISTOR	270 5% 1/10W	
R 616	NRSA02J-331X	MG RESISTOR	330 5% 1/10W	
R 617	NRSA02J-391X	MG RESISTOR	390 5% 1/10W	
R 618	NRSA02J-471X	MG RESISTOR	470 5% 1/10W	
R 619	NRSA02J-561X	MG RESISTOR	560 5% 1/10W	
R 620	NRSA02J-821X	MG RESISTOR	820 5% 1/10W	
R 621	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
R 631	NRSA02J-181X	MG RESISTOR	180 5% 1/10W	
R 632	NRSA02J-391X	MG RESISTOR	390 5% 1/10W	
R 633	NRSA02J-391X	MG RESISTOR	390 5% 1/10W	
R 634	NRSA02J-331X	MG RESISTOR	330 5% 1/10W	
R 635	NRSA02J-331X	MG RESISTOR	330 5% 1/10W	
R 636	NRSA02J-511X	MG RESISTOR	510 5% 1/10W	
R 637	NRSA02J-511X	MG RESISTOR	510 5% 1/10W	
R 638	NRSA02J-511X	MG RESISTOR	510 5% 1/10W	
R 639	NRSA02J-391X	MG RESISTOR	390 5% 1/10W	
R 640	NRSA02J-391X	MG RESISTOR	390 5% 1/10W	
R 651	NRSA02J-152X	MG RESISTOR	1.5K 5% 1/10W	
R 652	NRSA02J-473X	MG RESISTOR	47K 5% 1/10W	
R 653	NRSA02J-154X	MG RESISTOR	150K 5% 1/10W	
R 654	NRSA02J-103X	MG RESISTOR	10K 5% 1/10W	
R 655	NRSA02J-103X	MG RESISTOR	10K 5% 1/10W	
R 656	NRSA02J-103X	MG RESISTOR	10K 5% 1/10W	
S 601	NSW0066-001X	TACT SWITCH		
S 602	NSW0066-001X	TACT SWITCH		
S 603	NSW0066-001X	TACT SWITCH		
S 604	NSW0066-001X	TACT SWITCH		
S 605	NSW0066-001X	TACT SWITCH		
S 606	NSW0066-001X	TACT SWITCH		
S 607	NSW0066-001X	TACT SWITCH		
S 608	NSW0066-001X	TACT SWITCH		
S 609	NSW0066-001X	TACT SWITCH		
S 610	NSW0066-001X	TACT SWITCH		
S 611	NSW0066-001X	TACT SWITCH		
S 612	NSW0066-001X	TACT SWITCH		
S 613	NSW0066-001X	TACT SWITCH		
S 614	NSW0066-001X	TACT SWITCH		
S 615	NSW0066-001X	TACT SWITCH		
S 616	NSW0066-001X	TACT SWITCH		
S 617	NSW0066-001X	TACT SWITCH		
S 618	NSW0066-001X	TACT SWITCH		
S 619	NSW0066-001X	TACT SWITCH		
S 620	NSW0066-001X	TACT SWITCH		
S 621	NSW0066-001X	TACT SWITCH		

■ Electrical Parts List (Main P. C. B.)

BLOCK NO. 05

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 1	QER41CM-106	E CAPACITOR	10MF 20% 16V	
C 2	QDX11EK-223Z	C CAPACITOR		
C 3	QERF1HM-104Z	E CAPACITOR	.10MF 20% 50V	
C 4	QERF1HM-104Z	E CAPACITOR	.10MF 20% 50V	
C 5	QER41AM-227	E CAPACITOR	220MF 20% 10V	
C 6	QFV41HJ-223	TF CAPACITOR	.022MF 5% 50V	
C 7	QFV41HJ-223	TF CAPACITOR	.022MF 5% 50V	
C 8	QERF1HM-104Z	E CAPACITOR	.10MF 20% 50V	
C 10	QCB1HK-121Y	C CAPACITOR	120PF 10% 50V	
C 11	QDYB1CM-103Y	C CAPACITOR		
C 131	QER41HM-105	E CAPACITOR	FM	
C 132	QER41HM-105	E CAPACITOR	TAPE	
C 133	QER41HM-105	E CAPACITOR	CD	
C 134	QFLA1HJ-822Z	M CAPACITOR	8200PF 5% 50V	
C 135	QFV61HJ-154Z	TF CAPACITOR	.15MF 5% 50V	
C 136	QFV41HJ-224	TF CAPACITOR	.22MF 5% 50V	
C 137	QFV41HJ-333	TF CAPACITOR	.033MF 5% 50V	
C 138	QFLK1HJ-562Z	M CAPACITOR	5600PF 5% 50V	
C 150	QER41HM-105	E CAPACITOR	FRONT	
C 152	QCB1HK-471Y	C CAPACITOR	FRONT	
C 160	QER41HM-105	E CAPACITOR	REAR	
C 162	QCB1HK-471Y	C CAPACITOR	REAR	
C 231	QER41HM-105	E CAPACITOR	FM	
C 232	QER41HM-105	E CAPACITOR	TAPE	
C 233	QER41HM-105	E CAPACITOR	CD	
C 234	QFLA1HJ-822Z	M CAPACITOR	8200PF 5% 50V	
C 235	QFV61HJ-154Z	TF CAPACITOR	.15MF 5% 50V	
C 236	QFV41HJ-224	TF CAPACITOR	.22MF 5% 50V	
C 237	QFV41HJ-333	TF CAPACITOR	.033MF 5% 50V	
C 238	QFLK1HJ-562Z	M CAPACITOR	5600PF 5% 50V	
C 250	QER41HM-105	E CAPACITOR	FRONT	
C 252	QCB1HK-471Y	C CAPACITOR	FRONT	
C 260	QER41HM-105	E CAPACITOR	REAR	
C 262	QCB1HK-471Y	C CAPACITOR	REAR	
C 541	QER41HM-105	E CAPACITOR	1.0MF 20% 50V	
C 542	QCF11HZ-473	C CAPACITOR	.047MF +80:-20%	
C 543	QERF1HM-474Z	E CAPACITOR	.47MF 20% 50V	
C 544	QER41CM-226	E CAPACITOR	22MF 20% 16V	
C 701	QDUB1HJ-270Y	C CAPACITOR		
C 702	QDCB1HJ-220Y	C CAPACITOR		
C 703	QER40JM-107	E CAPACITOR	100MF 20% 6.3V	
C 705	QER41CM-106	E CAPACITOR	10MF 20% 16V	
C 706	QDYB1CM-103Y	C CAPACITOR		
C 707	QFV41HJ-103	TF CAPACITOR	.010MF 5% 50V	
C 708	QFV61HJ-153Z	TF CAPACITOR	.015MF 5% 50V	
C 709	QFV41HJ-473	TF CAPACITOR	.047MF 5% 50V	
C 710	QCB1HK-271Y	C CAPACITOR	270PF 10% 50V	
C 751	QDYB1CM-103Y	C CAPACITOR		
C 771	QER41AM-227	E CAPACITOR	220MF 20% 10V	
C 772	QER41HM-225	E CAPACITOR	2.2MF 20% 50V	
C 773	QDGB1HK-102Y	C CAPACITOR		
C 781	QEDJ1CM-106Z	E CAPACITOR	10MF 20% 16V	
C 783	QEZ0423-228	E CAPACITOR	2200MF	
C 784	QER41AM-227	E CAPACITOR	220MF 20% 10V	
C 785	QETB1CM-108	E CAPACITOR	1000MF 20% 16V	

BLOCK NO. 05

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 792	QFV11HJ-334A2	TF CAPACITOR	.33MF 5% 50V	
C 793	QFV41HJ-104	TF CAPACITOR	.10MF 5% 50V	
C 931	QER41AM-107	E CAPACITOR	100MF 20% 10V	
C 932	QDYB1CM-103Y	C CAPACITOR		
C 933	QER41AM-107	E CAPACITOR	100MF 20% 10V	
C 934	QER41CM-476	E CAPACITOR	47MF 20% 16V	
C 951	QER41EM-475	E CAPACITOR	4.7MF 20% 25V	
C 971	QER41EM-475	E CAPACITOR	4.7MF 20% 25V	
C 972	QER41AM-227	E CAPACITOR	220MF 20% 10V	
C 981	QEZ0337-228	E CAPACITOR	2200MF	
C 982	QDYB1CM-103Y	C CAPACITOR		
C 983	QDYB1CM-103Y	C CAPACITOR		
C 984	QEK41CM-106	E CAPACITOR	10MF 20% 16V	
C 985	QDYB1CM-103Y	C CAPACITOR		
C 986	QER41CM-106	E CAPACITOR	10MF 20% 16V	
C 987	QER41CM-106	E CAPACITOR	10MF 20% 16V	
C 988	QER41CM-476	E CAPACITOR	47MF 20% 16V	
CJ701	VMC0334-001	CONNECTOR	TO FRONT PANEL	
CJ921	QNN0170-001	PIN JACK (REEL)		
CP702	QGB1214J1-18S	CONNECTOR	TO MECHA	
CP751	QNZ0095-001	CONNECTOR	CH CONNECTOR	
CP981	QNZ0002-001	16P CONNECTOR		
D 1	1SS119-041	SI DIODE		
D 2	1SS119-041	SI DIODE		
D 161	1SS119-041	SI DIODE	REAR	
D 261	1SS119-041	SI DIODE	REAR	
D 541	RB721Q-T2	S.B.DIODE		
D 542	RB721Q-T2	S.B.DIODE		
D 704	MTZJ5.6B-T2	ZENER DIODE		
D 705	MTZJ5.6B-T2	ZENER DIODE		
D 706	MTZJ5.6B-T2	ZENER DIODE		
D 707	MTZJ5.6B-T2	ZENER DIODE		
D 708	MTZJ5.6B-T2	ZENER DIODE		
D 709	MTZJ5.6B-T2	ZENER DIODE		
D 710	1SS119-041	SI DIODE		
D 711	MTZJ5.6B-T2	ZENER DIODE		
D 712	MTZJ6.2C-T2	ZENER DIODE		
D 714	1SS119-041	SI DIODE	AREA1	
D 715	1SS119-041	SI DIODE	AREA0	
D 716	1SS119-041	SI DIODE		
D 718	RB721Q-T2	S.B.DIODE		
D 771	MTZJ9.1C-T2	ZENER DIODE		
D 781	RB721Q-T2	S.B.DIODE		
D 784	DSK10C-T1	DIODE		
D 785	DSK10C-T1	DIODE		
D 791	1SS119-041	SI DIODE		
D 792	1SS119-041	SI DIODE		
D 974	1SS119-041	SI DIODE		
D 981	1N5401-TM	DIODE		
D 990	MTZ11B-T2	SI DIODE		
IC701	LC72362N-9486	IC		
IC751	HD74HC126P	IC	CD-CH	
IC781	BA3918-V1	IC	REGULATOR	
IC790	KIA7810PI	IC		
IC931	TEA6320T-X	IC		

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BLOCK NO. 05

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
IC981	HA13158A	IC		
J 1	QN20009-001	CAR ANT JACK		
L 1	QQL231K-330Y	INDUCTOR		
L 781	QQL231K-470Y	INDUCTOR		
L 782	QQL231K-470Y	INDUCTOR		
L 981	QQR0704-001	CHOKE COIL		
Q 1	2SA1706/ST/-T	TRANSISTOR		
Q 2	DTC114ESA-T	D.TRANSISTOR		
Q 3	2SA1317/ST/-T	TRANSISTOR *		
Q 5	DTC114ESA-T	D.TRANSISTOR		
Q 161	2SC3330/ST/-T	TRANSISTOR	REAR	
Q 261	2SC3330/ST/-T	TRANSISTOR	REAR	
Q 541	2SC3330/ST/-T	TRANSISTOR		
Q 771	2SC3330/ST/-T	TRANSISTOR		
Q 772	2SC3330/ST/-T	TRANSISTOR		
Q 781	DTC114ESA-T	D.TRANSISTOR		
Q 782	2SA1706/ST/-T	TRANSISTOR		
Q 783	DTC114ESA-T	D.TRANSISTOR		
Q 784	2SA1317/ST/-T	TRANSISTOR *		
Q 789	DTA114ESA-T	D.TRANSISTOR		
Q 971	DTC114ESA-T	D.TRANSISTOR		
Q 972	DTA114ESA-T	D.TRANSISTOR		
Q 987	DTA114ESA-T	D.TRANSISTOR		
Q 988	DTC114ESA-T	D.TRANSISTOR		
Q 989	DTA114ESA-T	D.TRANSISTOR		
R 1	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
R 2	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 3	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 4	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
R 5	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 6	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
R 9	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
R 14	QRE141J-155Y	C RESISTOR	1.5M 5% 1/4W	
R 15	QRE141J-335Y	C RESISTOR	3.3M 5% 1/4W	
R 17	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
R 51	QRE141J-202Y	C RESISTOR	2.0K 5% 1/4W	
R 52	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	
R 53	QRE141J-203Y	C RESISTOR	20K 5% 1/4W	
R 54	QRE141J-752Y	C RESISTOR	7.5K 5% 1/4W	
R 61	QRE141J-202Y	C RESISTOR	2.0K 5% 1/4W	
R 62	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	
R 63	QRE141J-203Y	C RESISTOR	20K 5% 1/4W	
R 64	QRE141J-752Y	C RESISTOR	7.5K 5% 1/4W	
R 131	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
R 132	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
R 133	QRE141J-154Y	C RESISTOR	150K 5% 1/4W	
R 151	QRE141J-273Y	C RESISTOR	FRONT	
R 152	QRE141J-823Y	C RESISTOR	FRONT	
R 161	QRE141J-273Y	C RESISTOR	REAR	
R 162	QRE141J-823Y	C RESISTOR	REAR	
R 163	QRE141J-821Y	C RESISTOR	REAR	
R 164	QRE141J-101Y	C RESISTOR	REAR	
R 165	QRE141J-222Y	C RESISTOR	REAR	
R 231	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
R 232	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	

BLOCK NO. 05

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 233	QRE141J-154Y	C RESISTOR	150K 5% 1/4W	
R 251	QRE141J-273Y	C RESISTOR	FRONT	
R 252	QRE141J-823Y	C RESISTOR	FRONT	
R 261	QRE141J-273Y	C RESISTOR	REAR	
R 262	QRE141J-823Y	C RESISTOR	REAR	
R 263	QRE141J-821Y	C RESISTOR	REAR	
R 264	QRE141J-101Y	C RESISTOR	REAR	
R 265	QRE141J-222Y	C RESISTOR	REAR	
R 542	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
R 543	QRE141J-123Y	C RESISTOR	12K 5% 1/4W	
R 544	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 545	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
R 546	QRE141J-184Y	C RESISTOR	180K 5% 1/4W	
R 547	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
R 702	QRE141J-473Y	C RESISTOR	MSIN	
R 703	QRE141J-473Y	C RESISTOR	F/R	
R 704	QRE141J-473Y	C RESISTOR	MODE	
R 705	QRE141J-473Y	C RESISTOR	TAPEEND	
R 706	QRE141J-473Y	C RESISTOR	STANDBY	
R 707	QRE141J-473Y	C RESISTOR	TAPEIN	
R 708	QRE141J-473Y	C RESISTOR	SD/ST	
R 709	QRE141J-472Y	C RESISTOR	MUTE	
R 710	QRE141J-472Y	C RESISTOR	FM/AM	
R 711	QRE141J-473Y	C RESISTOR	REMO	
R 712	QRE141J-332Y	C RESISTOR	KEY2	
R 713	QRE141J-332Y	C RESISTOR	KEY1	
R 714	QRE141J-332Y	C RESISTOR	KEY0	
R 715	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
R 716	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
R 717	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
R 718	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
R 719	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
R 720	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
R 721	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
R 722	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
R 724	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
R 725	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
R 726	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
R 727	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
R 751	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 752	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
R 753	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
R 754	QRE141J-334Y	C RESISTOR	330K 5% 1/4W	
R 755	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
R 756	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
R 757	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
R 758	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
R 759	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
R 760	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
R 761	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 762	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 763	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 764	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
R 771	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
R 772	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	

BLOCK NO. 05

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 773	GRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 774	GRE141J-152Y	C RESISTOR	1.5K 5% 1/4W	
R 783	GRE141J-473Y	C RESISTOR	47K 5% 1/4W	
R 784	GRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 785	GRE141J-473Y	C RESISTOR	47K 5% 1/4W	
R 786	GRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 787	GRE141J-6R8Y	C RESISTOR	6.8 5% 1/4W	
R 788	GRE141J-104Y	C RESISTOR	100K 5% 1/4W	
R 789	GRE141J-474Y	C RESISTOR	470K 5% 1/4W	
R 795	GRE141J-103Y	C RESISTOR	10K 5% 1/4W	
R 796	GRE141J-473Y	C RESISTOR	47K 5% 1/4W	
R 931	GRE141J-100Y	C RESISTOR	10 5% 1/4W	
R 951	GRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
R 971	GRE141J-473Y	C RESISTOR	47K 5% 1/4W	
R 972	GRE141J-471Y	C RESISTOR	470 5% 1/4W	
R 987	GRE141J-101Y	C RESISTOR	100 5% 1/4W	
R 988	GRE141J-242Y	C RESISTOR	2.4K 5% 1/4W	
R 989	GRE141J-123Y	C RESISTOR	12K 5% 1/4W	
R 990	GRE141J-103Y	C RESISTOR	10K 5% 1/4W	
TU 1	QAU0102-001	TUNER PACK		
X 701	QAX0406-0012	CRYSTAL		

KS-FX440
KS-FX240

■ Electrical Parts List (Switch)

BLOCK NO. 06

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 651	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
C 652	NBE20JM-475X	TS E CAPACITOR		
C 653	NCB21HK-681X	C CAPACITOR	680PF 10% 50V	
CP701	VMC0335-001	CONNECTOR		
D 601	SML-310LT/MN/-X	LED		
D 602	SML-310FT/JKL/X	LED		
D 603	SML-310FT/JKL/X	LED		
D 604	SML-310FT/JKL/X	LED		
D 605	SML-310FT/JKL/X	LED		
D 606	SML-310FT/JKL/X	LED		
D 607	SML-310FT/JKL/X	LED		
D 608	SML-310FT/JKL/X	LED		
D 609	SML-310FT/JKL/X	LED		
D 610	SML-310FT/JKL/X	LED		
D 611	SML-310FT/JKL/X	LED		
D 612	SML-310FT/JKL/X	LED		
D 613	SML-310FT/JKL/X	LED		
D 614	SML-310FT/JKL/X	LED		
D 615	SML-310FT/JKL/X	LED		
D 616	SML-310FT/JKL/X	LED		
D 617	SML-310FT/JKL/X	LED		
D 618	SML-310FT/JKL/X	LED		
D 619	SML-310FT/JKL/X	LED		
D 620	SML-310FT/JKL/X	LED		
D 621	SML-310FT/JKL/X	LED		
D 652	MA152WA-X	DIODE		
D 653	MA152WA-X	DIODE		
D 654	MA152WK-X	SI DIODE		
D 655	MA152WK-X	SI DIODE		
D 656	MA3047/M/-X	ZENER DIODE		
IC651	LC75823E	IC		
PL601	QLL0056-001	PILOT LAMP	GREEN CAP	
PL603	QLL0056-001	PILOT LAMP	GREEN CAP	
R 601	NRSA02J-271X	MG RESISTOR	270 5% 1/10W	
R 602	NRSA02J-331X	MG RESISTOR	330 5% 1/10W	
R 603	NRSA02J-391X	MG RESISTOR	390 5% 1/10W	
R 604	NRSA02J-471X	MG RESISTOR	470 5% 1/10W	
R 605	NRSA02J-561X	MG RESISTOR	560 5% 1/10W	
R 606	NRSA02J-821X	MG RESISTOR	820 5% 1/10W	
R 607	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
R 608	NRSA02J-271X	MG RESISTOR	270 5% 1/10W	
R 609	NRSA02J-331X	MG RESISTOR	330 5% 1/10W	
R 610	NRSA02J-391X	MG RESISTOR	390 5% 1/10W	
R 611	NRSA02J-471X	MG RESISTOR	470 5% 1/10W	
R 612	NRSA02J-561X	MG RESISTOR	560 5% 1/10W	
R 613	NRSA02J-821X	MG RESISTOR	820 5% 1/10W	
R 614	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
R 615	NRSA02J-271X	MG RESISTOR	270 5% 1/10W	
R 616	NRSA02J-331X	MG RESISTOR	330 5% 1/10W	
R 617	NRSA02J-391X	MG RESISTOR	390 5% 1/10W	
R 618	NRSA02J-471X	MG RESISTOR	470 5% 1/10W	
R 619	NRSA02J-561X	MG RESISTOR	560 5% 1/10W	
R 620	NRSA02J-821X	MG RESISTOR	820 5% 1/10W	
R 621	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
R 631	NRSA02J-821X	MG RESISTOR	820 5% 1/10W	

BLOCK NO. 06

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 632	NRSA02J-681X	MG RESISTOR	680 5% 1/10W	
R 634	NRSA02J-511X	MG RESISTOR	510 5% 1/10W	
R 635	NRSA02J-511X	MG RESISTOR	510 5% 1/10W	
R 636	NRSA02J-821X	MG RESISTOR	820 5% 1/10W	
R 637	NRSA02J-821X	MG RESISTOR	820 5% 1/10W	
R 638	NRSA02J-821X	MG RESISTOR	820 5% 1/10W	
R 639	NRSA02J-561X	MG RESISTOR	560 5% 1/10W	
R 640	NRSA02J-561X	MG RESISTOR	560 5% 1/10W	
R 651	NRSA02J-152X	MG RESISTOR	1.5K 5% 1/10W	
R 652	NRSA02J-473X	MG RESISTOR	47K 5% 1/10W	
R 653	NRSA02J-154X	MG RESISTOR	150K 5% 1/10W	
R 654	NRSA02J-103X	MG RESISTOR	10K 5% 1/10W	
R 655	NRSA02J-103X	MG RESISTOR	10K 5% 1/10W	
R 656	NRSA02J-103X	MG RESISTOR	10K 5% 1/10W	
S 601	NSW0066-001X	TACT SWITCH		
S 602	NSW0066-001X	TACT SWITCH		
S 603	NSW0066-001X	TACT SWITCH		
S 604	NSW0066-001X	TACT SWITCH		
S 605	NSW0066-001X	TACT SWITCH		
S 606	NSW0066-001X	TACT SWITCH		
S 607	NSW0066-001X	TACT SWITCH		
S 608	NSW0066-001X	TACT SWITCH		
S 609	NSW0066-001X	TACT SWITCH		
S 610	NSW0066-001X	TACT SWITCH		
S 611	NSW0066-001X	TACT SWITCH		
S 612	NSW0066-001X	TACT SWITCH		
S 613	NSW0066-001X	TACT SWITCH		
S 614	NSW0066-001X	TACT SWITCH		
S 615	NSW0066-001X	TACT SWITCH		
S 616	NSW0066-001X	TACT SWITCH		
S 617	NSW0066-001X	TACT SWITCH		
S 618	NSW0066-001X	TACT SWITCH		
S 619	NSW0066-001X	TACT SWITCH		
S 620	NSW0066-001X	TACT SWITCH		
S 621	NSW0066-001X	TACT SWITCH		

■ Electrical Parts List (Head Amp.P. C. B.)

BLOCK NO. 07

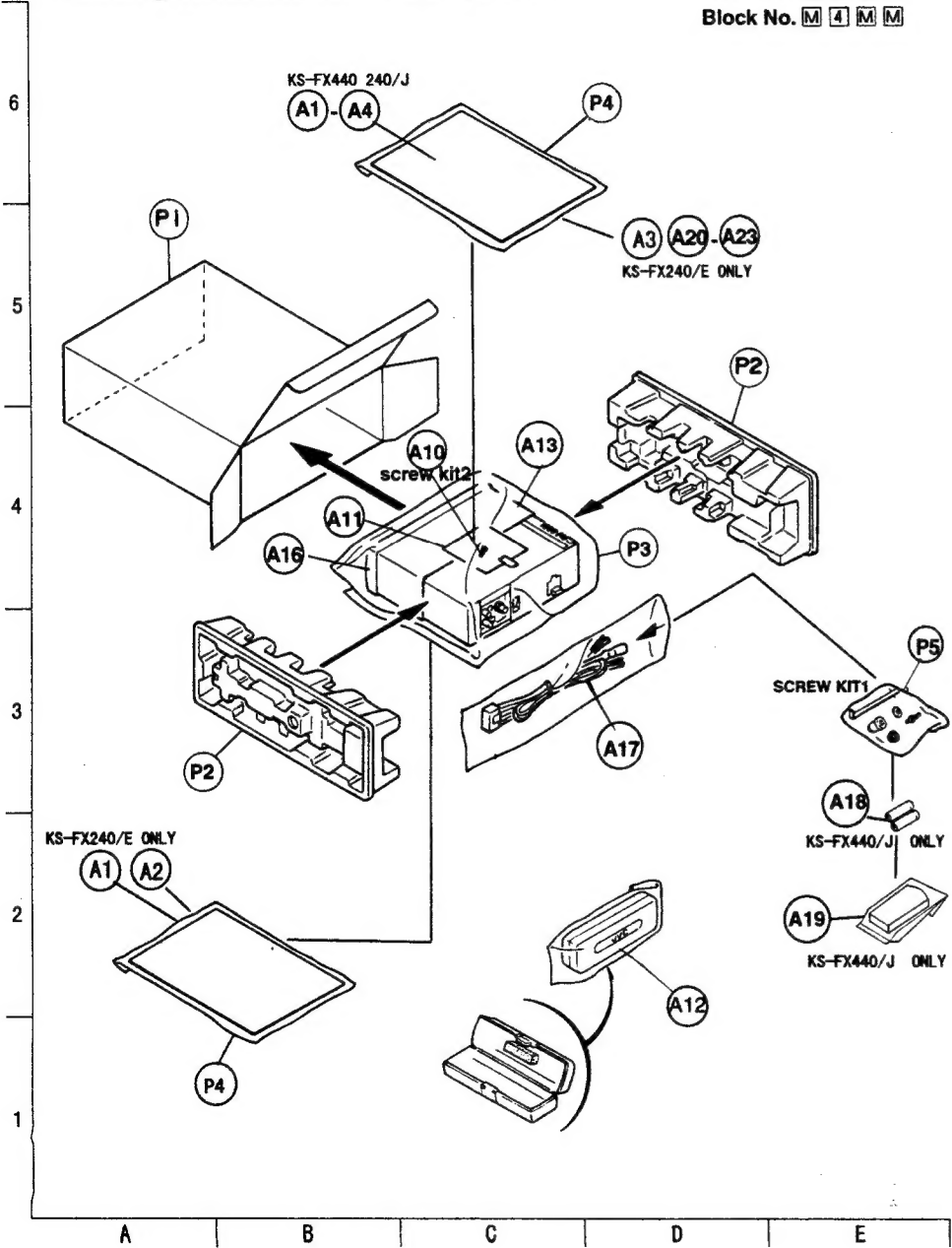
REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 101	NCS21HJ-471X	C CAPACITOR	470PF 5% 50V	
C 102	QFV41HJ-103	TF CAPACITOR	.010MF 5% 50V	
C 103	QE661HM-105Z	NP E CAPACITOR	1.0MF 20% 50V	
C 104	QFV41HJ-104	TF CAPACITOR	.10MF 5% 50V	
C 105	NCS21HJ-470X	C CAPACITOR	47PF 5% 50V	
C 201	NCS21HJ-471X	C CAPACITOR	470PF 5% 50V	
C 202	QFV41HJ-103	TF CAPACITOR	.010MF 5% 50V	
C 203	QE661HM-105Z	NP E CAPACITOR	1.0MF 20% 50V	
C 204	QFV41HJ-104	TF CAPACITOR	.10MF 5% 50V	
C 205	NCS21HJ-470X	C CAPACITOR	47PF 5% 50V	
C 501	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
C 502	NCB21EK-104X	C CAPACITOR	.10MF 10% 25V	
C 503	QEK41CM-106	E CAPACITOR	10MF 20% 16V	
C 901	QER41CM-226	E CAPACITOR	22MF 20% 16V	
C 902	NCS21HJ-221X	C CAPACITOR	220PF 5% 50V	
C 903	QEK41HM-474	E CAPACITOR	.47MF 20% 50V	
C 904	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
C 905	NCB21EK-104X	C CAPACITOR	.10MF 10% 25V	
C 906	QEK41CM-226	E CAPACITOR	22MF 20% 16V	
CJ501	QGB1214K1-18S	CONNECTOR		
CJ503	QGB1214K1-10S	CONNECTOR		
CP502	QGA2001F1-07	7P PLUG ASSY		
D 501	DSK10C-T1	DIODE		
D 502	MA3036/L/-X	ZENER DIODE		
D 503	MA3075/M/-X	ZENER DIODE		
IC501	LB1641	IC		
IC901	CXA2510AQ	IC	KS-FX440/J	
IC901	CXA2509AQ	IC	KS-FX240/J/E	
Q 501	2SA1706/ST/-T	TRANSISTOR		
Q 502	DTC114EKA-X	TRANSISTOR		
Q 503	DTC114EKA-X	TRANSISTOR		
R 101	NRSA02J-104X	MG RESISTOR	100K 5% 1/10W	
R 103	NRSA02J-123X	MG RESISTOR	12K 5% 1/10W	
R 104	NRSA02J-304X	CR RESISTOR	300K 5% 1/10W	
R 105	NRSA02J-181X	MG RESISTOR	180 5% 1/10W	
R 108	NRS181J-512X	MG RESISTOR	5.1K 5% 1/8W	
R 109	NRSA02J-152X	MG RESISTOR	1.5K 5% 1/10W	
R 201	NRSA02J-104X	MG RESISTOR	100K 5% 1/10W	
R 203	NRSA02J-123X	MG RESISTOR	12K 5% 1/10W	
R 204	NRSA02J-304X	CR RESISTOR	300K 5% 1/10W	
R 205	NRS181J-181X	MG RESISTOR	180 5% 1/8W	
R 208	NRSA02J-512X	MG RESISTOR	5.1K 5% 1/10W	
R 209	NRSA02J-152X	MG RESISTOR	1.5K 5% 1/10W	
R 501	NRS181J-473X	MG RESISTOR	47K 5% 1/8W	
R 502	NRS181J-332X	MG RESISTOR	3.3K 5% 1/8W	
R 503	NRSA02J-332X	MG RESISTOR	3.3K 5% 1/10W	
R 504	QRT036J-8R2	OMF RESISTOR	8.2 5% 1/3W	
R 505	NRS181J-330X	MG RESISTOR	33 5% 1/8W	
R 506	NRSA02J-222X	MG RESISTOR	2.2K 5% 1/10W	
R 901	NRS181J-101X	MG RESISTOR	100 5% 1/8W	
R 902	NRSA02J-392X	MG RESISTOR	3.9K 5% 1/10W	
R 903	NRSA02J-223X	MG RESISTOR	22K 5% 1/10W	
R 904	NRSA02J-125X	MG RESISTOR	1.2M 5% 1/10W	
R 905	NRSA02J-153X	MG RESISTOR	15K 5% 1/10W	
R 907	NRSA02J-183X	MG RESISTOR	18K 5% 1/10W	

BLOCK NO. 07

[illegible]KS-FX440
KS-FX240

Packing Materials and Accessories

Block No. **M 3 M M**
Block No. **M 4 M M**



Packing Parts List

BLOCK NO. M 3 M M						
REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
P 1	FSPE3001-107	CARTON	KS-FX440/J	1		
	FSPE3001-105	CARTON	KS-FX240/J	1		
	FSPE3004-021	CARTON	KS-FX240/E	1		
P 2	FSPH1014-002	PAPER CUSHION	KS-FX240/J	2		
	FSPH1015-001	PAPER CUSHION	KS-FX440/J	2		
P 3	FSPH1015-001	PAPER CUSHION	KS-FX240/E	2		
	VPE3005-064	POLY BAG	KS-FX440/J	1		
P 4	QPA02504505P	POLY BAG	KS-FX240/E	1		
	VPE3005-066	POLY BAG	KS-FX240/J	1		
P 5	QPA01703505P	POLY BAG	KS-FX240/E	2		
	QPA01703505P	POLY BAG	KS-FX240/J	1		
P 5	QPA01703505P	POLY BAG	KS-FX440/J	1		
	QPA00801205	POLY BAG	KS-FX440/J	1		

■ Accessories Parts

<<MEMO>>

BLOCK NO. 440							
Δ	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
A	1	FSUN3058-631	INST BOOK	KS-FX440/J	1		
		FSUN3058-631S	INTS BOOK	KS-FX240/J	1		
		FSUN3059-311	INTS BOOK	KS-FX240/E	1		
A	2	FSUN3059-321	INSTALL MANUAL	KS-FX240/E	1		
		FSUN3058-T631S	INSTALL MANUAL	KS-FX240/J	1		
		FSUN3058-T631	INSTALL MANUAL	KS-FX440/J	1		
A	3	BT-51009-3	WARRANTY CARD	KS-FX440.240/J	1		
		BT-52001-4	WARRANTY CARD	KS-FX440.240/C	1		
		BT-54008-1	WARRANTY CARD	KS-FX240/E	1		
A	4	BT-51015-1	SVC CENTER LIST	KS-FX440/J	1		
		BT-20071	SVC CENTER LIST	KS-FX440.240/C	1		
		BT-20137	SVC CENTER LIST	KS-FX240/J	1		
A	5	VK24027-202	PLUG NUT		1		
A	6	VKH4871-001SS	MOUNT BOLT		1		
A	7	VK24328-001	LOCK NUT		1		
A	8	WNS50002	WASHER		1		
A	9	FSKL4010-002	HOOK		2		
A	10	VK24777-001	MINI SCREW		1		
A	11	FSYA4001-001	SHEET		1		
A	12	FSJB3001-00A	HARD CASE	KS-FX440.240/J	1		
		FSJB3001-30A	HARD CASE	KS-FX240240/E	1		
A	13	FSKM2004-001	MOUNTING SLEEVE		1		
A	16	FSJD2034-001	TRIM PLATE		1		
A	17	QAM0089-001	16P CORD ASSY	KS-FX240/E	1		
		QAM0013-005	CAR CABLE	KS-FX440.240/J	1		
A	18	-----	BATTERY	KS-FX440/J ONLY	2		
A	19	QAL0075-001	REMOCON	KS-FX440/J ONLY	1		
A	20	VND3050-002	IDENTITY CARD	KS-FX240/E ONLY	1		
A	21	FSUN3059-T211	INSTALL MANUAL	KS-FX240/E ONLY	1		
A	22	FSUN3059-T451	INSTALL MANUAL	KS-FX240/E ONLY	1		
A	23	FSUN3059-T481	INSTALL MANUAL	KS-FX240/E ONLY	1		
KIT 1		KDGS717K-SCREW1	SCREW KIT 1	A5-A9	1		
KIT 2		KDGS727J-SCREW2	SCREW KIT 2	A10.11	1		

SCREW KIT 1



A9 Hook



A6 Mount Bolt



A7 Lock Nut



A5 Plug Nut



A8 Washer

SCREW KIT 2



A10
Screw

A11
Sheet